An Address
ON
THE RELATION OF BIOLOGY TO MEDICINE.

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MR. CHAIRMAN AND GENTLEMEN,—Before dealing with the subject which I propose to bring before you this evening I want to make a few general remarks about the great variety of subjects that the study of medicine gives us the opportunity of following. Every year the scope of these is widening, so diverse are the branches of knowledge with which medicine is related. There are many matters in medicine which bring it into close relationship with literary pursuits and more particularly perhaps with the writings and sayings of the ancient physicians and surgeons, and medicine in more modern days is getting more and more closely associated with a number of economic questions. A very recent development of this kind is afforded by the economic questions which are related to the establishment of sanatoriums, with reference more especially to the health of the working classes. Although all these questions are of interest and some are of very great and pressing importance the relation of medicine to scientific studies, to pure science, is becoming daily of far greater and increasing importance. It is the custom at the present day to look upon medicine still as an art—and no doubt it is in many respects an art, especially, perhaps, as regards the difficulty which the exponents of medicine have in transmitting their knowledge and acquirements to others, in which certainly medicine is more akin to an art than a science; yet I cannot help contrasting the position of medicine as a science now with what it was comparatively a very few years ago when I last spoke before this society. I cannot help contrasting it because of the very great progress that has been made in medicine. This progress when compared with that of its sister branch of knowledge—surgery—is often considered to be rather slow. Since I last spoke in this room, some 13 or 14 years ago, without wearying you with a mass of detail, I may take as illustrations of this progress three diseases which occur to me. At that time one's knowledge of these, certainly as regards diagnosis, was largely empirical, although with reference to one of them there was a certain amount of accurate scientific knowledge. The three diseases that I would allude to in reference to this particular point are tubercle, typhoid fever, and malaria. In all these diseases some 13 or 14 years ago diagnosis could not be said to be by any means accurate and was largely based on empirical knowledge, vague knowledge, and certainly not on accurate scientific results. At the present time no physician, if in doubt as to the presence of tubercle, whether of the chest or of other parts of the body, would rely on the ordinary methods of investigation that were then in vogue. He would call in the aid of an expert if he was not capable of doing the work himself; he would use the knowledge which had been obtained by purely scientific methods. When I was a student one had long descriptions of the differential diagnosis, for instance, of such a disease as typhoid fever from meningitis; there was a number of symptoms to which attention was drawn, and to the value of these in differential diagnosis great names were quoted. Now questions of that kind are often settled either by an examination of the urine or by an examination of the blood. The same remark applies to such a disease as malaria. I only mention these diseases by the way, as showing that even in medicine very striking results have been obtained by purely scientific methods of inquiry. I would further allude to one other method which at the present time is only at the threshold of its usefulness, at any rate in medicine, and that is the use of such a means of investigation as the Roentgen rays afford in the diagnosis of obscure diseases of the chest. When one thinks of the difference between 10 years ago and the present day in matters such as these one must admit the paramount importance of pure scientific knowledge for the adequate study of such a thing as medicine. A scientific training in medicine is essential from many points of view, and perhaps most of all to my mind from the fact that it is the only training that will give the physician or surgeon what may be called a proper habit of mind, and this quite apart from the use of a scientific training for its direct practical application. With these very scanty preliminary remarks I will pass on to the consideration of the subject-matter that I propose to bring before you.

Biology in relation to medicine may be considered from at least three points of view. It may be considered from the standpoint of a science of educational value and not simply from the point of view of its direct practical value in the study of disease but rather for the training that it affords to the human mind. It may, secondly, be considered in relation to practice, the immediate questions that present themselves to every practitioner in medicine; and it may be also considered from the point of view of the influence which it exerts, has exerted, and will exert still more in the future probably, on the progress of research in medicine. Although the second of these three is the one with which we are most often in actual contact the first and third are probably of more importance and it is a little difficult to say which of these two is the more important. In the training of the future medical practitioner it seems to me that it is most important that he should learn to pay due attention, but not an undue attention, to authority, and that he certainly should not accept statements simply because they are told him. He should verify these things for himself, and biology is certainly a science which enables that to be done by the student with very great facility. Further, if a man is to be a successful practitioner of his art he must be capable of observing with accuracy, and the different subjects that a medical student studies afford also different degrees of facility for attaining that object. Certainly the branches of biology, botany, and zoology, to my mind, are very valuable from this point of view; and I would like to say here that botany and zoology are no doubt from the point of view of training of very equal value, and further that it is not so very generally recognised nowadays as formerly that the old naturalist field work is a very excellent training from the point of view of producing accuracy of observation and accuracy of statement. Some of the most important and interesting discoveries in biological science have, even in recent times, been made by that branch of zoology which may be classified as the naturalist branch. An illustration of this in recent times is seen in Poulton, not to mention that great discoverers such as Darwin would come into this class. From the point of view of training biology offers special advantages to the medical practitioner and to the medical student because it enables him first of all to get, I think, a better idea of the complexity of living structures than he does by observation of the more purely technical branches which are more immediately related to the practice of his art.

I do not mean to say a word in disparagement of physiology, anatomy, or pathology, but when these things are studied from the exclusively human point of view it is rather doubtful, I think, whether the student gets such a good idea of the very great complexity of living matter and of living phenomena as he does if he studies the simpler forms of life. To the practitioner both of medicine and of surgery I would say that to my mind it is most essential for him—and I am afraid you may think I am going in for a great many platitudes—to have a thorough and ever-present conception before him of the extreme complexity of the phenomena with which he has to deal. Many of our mistakes and of the mistakes of others are dependent on not recognising this and thinking that things are much simpler than they really are. As regards the complexity of living matter an adequate study in the biological laboratory of the simpler forms of life—e.g., of an amœba or of the plasmodia formed by such organims as the mycetozoa (which are easily observed by anybody and everybody and where many of the greatest problems connected with piotoplasm can be observed with great simplicity and ease), gives a much better idea of the complexity of living matter than, say, the examination of a white blood corpuscle. A man gets a better general idea of protoplasmic activity from the study of the lower protozoa than from looking at a drop of human blood and studying the white corpuscles. I would therefore put in the forefront that one of the most striking uses of biology is that it

affords an opportunity of examining and gaining an insight into the complexity of living matter. Not only does it do this but in the case of pathology, anatomy, and physiology—to take the three sciences which lie at the root of medicine—a study of biology in the broad sense of zoology and botany, but especially of zoology, enables one to obtain a very much wider grasp of the facts which are taught in these three sciences.

If you take such a science as anatomy—I will not weary you with many instances, but let us consider a few instances and first of all the case of the pineal body. Surely, the study of comparative anatomy, without necessarily going into it at any great length, affords the student an opportunity of getting a very much more intelligent appreciation of the pineal body than the mere study of it from the point of view of human anatomy. I do not mean that it is of great importance to know much about the pineal body from the practical point of view but I am only quoting this as an illustration of the mental culture and wider train of thought which it is desirable for you as medical men to have and the pineal body and its relation to a primitive eye afford a striking illustration of this fact. Another, perhaps not quite so striking an instance, is the case of the thyroid. Many of the problems of the thyroid, or at any rate some of them, receive a good deal of light from one's knowledge of the comparative anatomy of the thyroid body. Another very striking case is that of the suprarenal where not only has the study of the comparative anatomy of the suprarenal, especially in fish, thrown light on the anatomy of the organ and to a certain extent on its morphology but it has in a very striking manner confirmed some of the physiological doctrines which are held in reference to this body. One might go on to many others and I might mention the cerebral convolutions and the vena azygos and the whole, for instance, of Gaskell's work, whether one accepts it in its entirety or not. At any rate the study of these things gives one a very much wider grasp and very much more insight into the study of human anatomy and from that point of view is very desirable. Another one which I will not pass over is the question of the spinal segments and such elementary facts as that the legs are not posterior to the trunk. The morphology of the limbs is difficult to explain and to teach from the human point of view but is very readily taught and receives adequate illustration when it is looked at from the comparative point of view. I think that I have adduced enough instances to show that the study of comparative anatomy is of great use, even when not followed to any great extent, from the point of view of giving a wider grasp to one's knowledge of the facts of human anatomy.

Passing to physiology the same thing occurs and one might adduce a number of striking instances, but I will only take one or at the most two. Take such a thing as the function of respiration and look at it from the point of view of the human organism. You will necessarily come to the conclusion that lungs are necessary, that muscles are necessary, that blood corpuscles are necessary, that hæmoglobin is necessary, and that therefore iron is necessary. If you look at this function from the point of view of biology or of comparative anatomy you will be able to find illustrations in the animal kingdom in which each one of these several structures that I have mentioned may be absent. There are large groups of organisms without lungs but having branchiæ; there are organisms with lungs but with no diaphragm or with an incomplete diaphragm; there are animals which breathe with their skin; there are animals which have hæmoglobin dissolved in the blood plasm instead of in the corpuscles; and there are animals that have no hæmoglobin, as for instance, in the crustacea where the iron containing hæmoglobin is often replaced by a copper compound. Facts such as these which, as I say, can be acquired without any very great labour and which are of no direct practical utility, are at the same time of immense importance to a properly educated medical man from the point of view of enlarging his conception of physiological processes in general. There are similar illustrations to that adduced as regards respiration to be adduced as regards circulation, but I will not take up your time by going into that and I will not detain you with the very large question which is of very great interest to the physiologist and to the zoologist as to whether many of the micro-organisms in the alimentary canal are not really instances of complicated symbiosis, of which one has so many illustrations both in the vegetable and animal kingdom. It is a vexed question and one which this is not the place to enter into. I simply mention it as an illustration of the wider grasp afforded by an intelligent study of biology.

Coming to the question of pathology we learn that the debt of medicine to biology is very great. In the first place we have to remember that we practically owe our fundamental conception of cellular pathology, as most of you may know, to the botanist. It was knowledge acquired in the first place by the botanist and then transferred from the vegetable to the animal kingdom and then ultimately to morbid products. I think one is justified in saying that at any rate the conception of this matter we owe very largely to the botanist. There is another debt which pathology owes to biology and that is with reference to the doctrine of phagocytosis, whether we hold the extreme views of Metchnikoff on the subject or not. Without going into questions of priority as to who was the first person to observe phagocytosis in the case of white blood corpuscles in the mammalian organism there can be, I think, no question that the great importance of phagocytes, the fundamental conception of the way in which these cells devour invading bodies, that this fundamental conception in many of its details we owe to Metchnikoff. We must remember that he worked out the facts of phagocytosis in relation to man in a progressive series of animals beginning with the lower invertebrates, passing to the higher invertebrates in the form of the crustacean—a large amount of his work was carried out on the crustacea, on Daphnia, and from these he passed to other and higher forms. He made observations on animals that had no circulatory system at all but had these amœboid cells; then on those with a vascular system containing but few corpuscles in the circulating fluid; until finally in the higher forms he investigated animals in which the circulatory system was well developed. One of the great differences between the work of Metchnikoff and that of Cohnheim rests in the fact that the one worked on the higher forms of life where the phenomena were necessarily very complicated owing to the development of the vascular system and that the other was enabled to separate the part played by the phagocytes on the one hand and the blood-vessels on the other by working in a biological manner—that is, by working on organisms proceeding from the lowest to the highest. Metchnikoff was, of course, led to the study of phagocytosis in inflammation to a great extent from his own work and the work of others of a purely biological character—namely, the transformation of insects, the metamorphosis of insects, and the disappearance of the tissues of pupæ. It was by studies of this kind that he was led to his well-known views on inflammation. Whether the doctrine of phagocytosis is to explain all or many of the facts of immunity or whether it is not, there can be no question of the fundamental importance of the doctrine, and there can equally be no question of the fact that it is a doctrine which we owe very largely to biology. Another doctrine, another series of facts in pathology which we also owe to the biologists, is the phenomenon of chemiotaxis which is very closely allied to phagocytosis. Chemiotaxis is a subject of the greatest importance to the pathologist and of fundamental value. Chemiotaxis was first observed by De Bary and other botanists in their studies on the plasmodium of the mycetozoa—a group of the protozoa where by the confluence of large numbers of amœboid forms masses of living semi-fluid protoplasm of large size are very readily formed. De Bary and others were enabled owing to the facility with which this mass of protoplasm could be examined to observe the fundamental phenomena of chemiotaxis and the way in which this mass could be made to move in one direction by putting near it a material which it liked and it could be made to move backwards by putting close to it material which it did not care about. You can easily carry out these observations for yourselves on one of the common forms of mycetozoa called *Badhamia utricularis*. The mycetozoa are to be found on rotten stumps of trees and by supplying them with suitable pabulum—Badhamia feeds on a certain fungus (*Stereum hirsutum*)—you can actually cause the plasmodium to move towards the pabulum so that this movement can be readily observed with a low-power microscope and may, indeed, even be seen with the naked eye. Chemiotaxis was observed by these biologists, and later became a doctrine of cardinal importance in pathology with reference to inflammation and also with reference to a number of other problems connected with the invasion of the tissues by micro-organisms.

Human pathology, then, is greatly indebted to biology for at least these three fundamental facts. In addition to that, biology is so closely related to pathology that it affords its assistance in many other directions. In the first place, diseases are common not only in animals but also in plants, and many of the phenomena of disease such as are observed on the human subject—and even for the matter of that the phenomena of injury—may be observed with almost equal readiness in the case of plants, and in some instances plants afford a more suitable structure for the investigations of infections of various kinds than is the case in animal organisms. I mean that it is not always, perhaps, realised that plants suffer from infectious diseases of as complicated a nature and with as complicated a life-history, as regards the organisms causing them, as is the case with many morbid processes with which we are familiar in the human subject. Just as there are diseases in the human body dependent on parasitic invasion in which the parasite causing the disease in the human subject has to pass a portion of its life-history in some other host, so precisely the same phenomena have been found in regard to certain infective diseases of plants, more especially those dependent on mycotic invasion. There can be no question that the investigation of certain plant diseases is capable of throwing considerable light on some fundamental problems of pathology, such as the resistance of tissues to the irritation of foreign bodies and so forth.

The subject of animal diseases is a very large one and the relationship of these to man is manifold. Some human diseases no doubt may be contracted from diseases of animals and we have that problem before us at the present time with reference to the great question of tuberculosis, and especially whether tubercle in man and tubercle in animals are identical, quite apart from the question whether the human disease can be directly acquired from animals. You have a very much wider grasp of these questions by studying biology; for instance, a comparative study of tuberculosis in animals will enable one to get a very much wider grasp and very much more accurate knowledge of the nature of the disease than a study of it which is purely restricted to the phenomena as they occur in man. In addition to that there are several instances in which the investigation of diseases in animals has thrown direct and immediate light on similar diseases in the human subject. I think that we are rather apt to forget, some of us, that the working out of the malaria problem and the relationship of the mosquito to the organism of malaria was after all not worked out first of all in human malaria but was worked out in the malaria of birds, and that it was with reference to the Proteosoma of birds—an organism somewhat allied to the organism of human malaria—that the part played by the mosquito was first decided. You could have no better instance of the very intimate relationship existing between biological problems and pathology, because after all it is purely a biological problem. It may be an important thing to man, but it is, so to say, an accident that malaria happens to be harmful to man. It is possible to go further than that and to point out another very interesting relationship between biological investigation and pathology still adhering to malaria in illustration. It is well known that in the case of some of these blood parasites affecting birds, particularly in the case of Proteosoma and of Halteridium, that some blood parasites do no particular harm to the bird in which they are parasitic and other closely allied forms produce illness in birds. We are not acquainted, as far as I know, at the present time with any protozoan blood parasite in man which is certainly benign, but at any rate we know from recent observation that the malaria parasite may exist in an apparently benign form in the blood of certain native races, and yet when transferred by the mosquito to the white man ill-effects are produced. There is a closely parallel instance in the case of the parasite of Texas fever in cattle where the organism may be present in the blood without producing ill-effects and yet produce the disease when transferred to other and healthy animals. There are certain flagellate organisms which live in the blood of rats, sewer rats, and which do no harm as far as we know, and there are certain other flagellate organisms of an allied kind which live in the blood of animals in India and South Africa which cause the fatal diseases of these animals known as "nagana," "surra," &c. A similar organism has been observed in the human subject in two, if not three, instances, and in one case causing disease in the human subject. The point to which I wish to draw attention is that we have evidence biologically that in the animal kingdom there may be apparently closely allied forms, the one existing in a benign and the other in a malignant form. In some instances—as, for instance, in the case of the trypanosomata—this may be dependent on a different life-history.

I have said enough to show that the study of biology pursued entirely for its own end and with no idea at all of direct practical utility affords the medical student an opportunity of obtaining a very much wider grasp and knowledge of other subjects, and especially of anatomy, physiology, and pathology. I think that is enough to show the paramount importance of biology as a suitable science to provide an adequate mental training for the student of medicine.

A very few words now with reference to biology in relation to practice. The number of diseases which are now known to be definitely due either to animal or vegetable organisms is daily increasing and I need only allude here to blood diseases, for instance, various forms of anæmia in animals and in the human subject to the varieties of malaria, to such indirect blood diseases as the anæmia produced by various intestinal worms, more particularly ankylostomum, &c. The number of morbid processes which are due to the presence of fungi, especially actinomycoses, aspergillar mycoses, and blastomycetes, is increasing, and then the very large number of intestinal and blood parasites, some of great importance, others of comparatively trivial importance.

Such a subject as filariasis is apparently assuming more important relations and development, as an increasing number of morbid conditions have been shown, and are being shown, to be due to the presence of filaria. To take an illustration, there is a considerable amount of evidence to show that a number of diseases in hot climates which have been spoken of as malarial are not due to malarial parasites but may be dependent on the presence of various forms of filaria, and there has been a suggestion that some of the endemic diseases of South Africa, such as the sleeping sickness, may also possibly be due to blood parasites of that kind. When you think of all these diseases, many of them present in this country, others of them restricted to hot climates, I think that you will admit that the number of them is quite sufficient for it to be necessary for the practitioner to have a more or less thorough knowledge of these branches of biology. One could dilate at some length with reference to the use of biology in practice but I prefer to go on with the final heading of my subject—namely the relation of biology to research in medicine.

The relation of biology to research is shown in the remarks made just now with reference to Metchnikoff's work and one cannot help thinking that although the relation is now a close one it cannot fail to become much closer still. From a strictly scientific point of view one must confess that medicine is but a branch of biology, but medicine is so large a subject in itself that it is convenient to classify it separately. I think that the study of biology amongst other things brings us to the fundamental question of the nature of disease and one cannot help thinking that the progress of modern discovery, especially in the last 10 or 15 years, has to a very great extent altered our views, or the views of some of us, as regards the nature of disease. The part played by parasites, in the broad sense of the word, in the production of disease, not very many years ago, certainly less than a quarter of a century ago, would have been almost entirely limited to the intestinal tapeworms, whereas at the present day the question almost presents itself to one sometimes as to whether there are any diseases which are not of parasitic origin. One must admit that there are certain injuries to the human frame where illness or death is dependent directly or remotely simply on the traumatism. One must admit that there are some diseases—as, for instance, myxœdema on the one hand and exophthalmic goitre on the other—where the fundamental pathological processes is an atrophy or an hypertrophy of some particular structures of the body. But really, if you put aside the traumatisms and the atrophies and the hypertrophies which are, after all, not very numerous, there are not very many diseases to which the human frame is liable which cannot be either directly correlated to the presence of a parasite or, at any rate, where there is not a shrewd suspicion that there is very probably a parasite. I am quite aware that there are, of course, some morbid conditions brought about by chemical changes where it is unnecessary to assume the presence of any living parasite. There are some morbid conditions brought about by the ingestion of poisons—lead,

for instance. There are others in which very possibly the disturbing toxic chemical substance is produced in the organism itself, and it is, of course, probable, or at any rate possible, that there are certain diseases which may be entirely dependent on disturbed metabolism, such as diabetes. In many of these conditions and diseases where there is apparently a chemical agent at work (an auto-intoxication) it is quite possible that this is not really the proximate cause but that in addition there is a parasite and the toxic substance is elaborated by this parasite.

When we think that it is only some 20 odd years since the bacterial nature of disease was clearly determined and that it is a much less number of years (I do not remember the exact date at which it was observed) that certain diseases were due to fungi—as, for instance, actinomycosis—and that it is only within the last few years that the protozoa have been found to be pathogenic agents in disease, one cannot help thinking that the number of diseases which are dependent on parasites and which are therefore dependent on a proper study, knowledge of, and acquaintance with biology is an ever-increasing one. It is only some 21 or 22 years since Laveran made his discovery of the presence of the malarial plasmodium in human blood and it is only within the last few months, or last few weeks even, that trypanosomata—i.e., flagellates—have been discovered in the blood of human beings on the West Coast of Africa, so that, as I say, the relationship of biology to medical research brings one at the very outset to the fundamental question of the nature of disease. When we look at the number of blood diseases in animals, the number of different forms of hæmaturia and anæmia which are definitely known in the case of domestic animals to be dependent on the presence of parasitic protozoa, one cannot help thinking that sooner or later the same fact will be demonstrated in the case of many of the human diseases of similar character. There are human diseases which greatly resemble in their clinical symptoms and pathological anatomy these diseases in animals and in a number of such human diseases organisms of this kind have been already described by certain authorities, although not accepted by all.

In considering, then, the relation of biology to research we are often brought at once face to face with the question of the nature of diseases and at the present day one cannot help alluding to the question which is present in the minds of many as regards the nature of cancer. It may be a somewhat heterodox opinion for a medical man to mention here but one cannot help thinking that whatever the nature of cancer may be a great amount of light will be thrown on that question by the researches of the pure biologist rather than by those of the human pathologist, and it would seem that if the question of cancer is to be elucidated it must be necessary to investigate two sets of facts, both of which are of fundamental biological importance. The first is the question whether the organisms described by so many in the case of cancer are the actual cause of disease and what is their exact nature, because no biologist has yet been able to arrive at any certain conclusion as to the biological position of these structures. That is one side of the cancer question and it is certainly a biological one, and another side of the cancer question in which the human morbid histologist may follow the lead of the biologist is the investigation of the minute histology of the cell which, notwithstanding the very large amount of work which has been done in human morbid anatomy, has been scarcely touched. The biologist has worked out with much assiduity not only the structure but also the relationship of the centrosome and of the nucleus to the cell protoplasm. A number of minute points of that kind have been worked out with very great detail in the case of infusoria and sponges, and also in the case of a number of the lower forms of life, but in the higher forms of life, and certainly in the case of morbid anatomy, these have scarcely been touched. There are some observers who hold the view that the nature of cancer is intimately associated with the question as to whether it is dependent on a deranged function of the cell, an anomalous condition of the cell, associated with nuclear and centrosomic changes. There are some writers who have said that the structures that have been described as parasites are nothing more nor less than these anomalous centrosomes. I mention this as an illustration, to my mind, of the problems, the very pressing problems, in human pathology which for their solution at any rate require the aid of the biologist, and, indeed, may perhaps receive their solution from him. These are all somewhat discursive remarks as regards the relationship of biology to the nature of disease.

Another biological doctrine of great interest to the human pathologist is the question of variation and the influence of environment—that is a biological doctrine of very great importance and it is also of great interest to the medical practitioner and student. When we consider problems such as whether bacteria may be saprophytic and then in certain circumstances become pathogenic—that is, practically speaking, a kind of variation. The facts of a total different order that I have already mentioned about the plasmodium of malaria existing in the blood of native races without causing any disturbance but on being transferred to the white races causing malaria—that, I should think, is also a fact of a closely related character. These illustrations will be sufficient to show that even such a question as variation, a highly technical branch of biology, has its relationship to the medical practitioner.

We come finally to one of the most vexed questions in biology which certainly is of great importance in human pathology and human medicine and to all of us, and that is the question of heredity. You cannot open a text-book of medicine without getting the most diverse instruction with reference to the part played by heredity in disease, and there can be scarcely any subject of more interest to the human race than an adequate and sound knowledge of such an important subject as that of heredity. Problems of heredity are, I think, scarcely to be settled by statistics as regards the incidence of disease in ascendants and descendants. It is, of course, to Weismann that we owe many of our fundamental and modern views on this subject. One of the most important conclusions is that acquired characters are not transmitted and that the only things which are transmitted are the characters of the germ plasm. That is a doctrine which must be of wide-reaching and very great importance to the pathologist and the medical student and one which perhaps in the present day has not attracted the notice that it deserves. Weismann, you will remember, was led to these far-reaching deductions by a close study of the duration of life in a great variety of forms, beginning with his conclusions that the amœba, or rather the protozoa, as far as is known, are the only immortal animals. He showed that in these low forms of life death was not by any means a necessary phenomenon of life, but was, so to say, an accident; in the higher forms the germ cells did not die. And from that he led us to the doctrine that acquired characters were not transmitted. From that he was led to the conclusion which is of most importance to us as medical students—namely, that impairment or mutilations of the parent or changes of health in them could not act directly and specifically on the germ cells; all they could do would be to increase or to diminish the vitality of the germ. To take a stock illustration, the fact of the parent acquiring a tuberculous disease could not by any possibility cause the germ plasm to become tuberculous except by direct infection and all it could do at the utmost would be to weaken the germ plasm so as to make it less resistant to the tuberculous and other invasions. This doctrine of Weismann as regards heredity and the whole question of germ plasm are matters of fundamental importance not only to the practitioner but to the student and to the pathologist, and it is of interest that Weismann's conclusions were arrived at from a study of purely biological phenomena and have received a very striking confirmation in the work of a pure pathologist—I refer to Dr. Bulloch. You are all familiar with the fact that if the blood of one animal is introduced intra-peritoneally into another animal the blood of the second animal develops certain properties after receiving the blood of the first animal. If you inject into the peritoneum of a rabbit the blood of an ox the blood of the rabbit acquires properties by which it hæmolyses the corpuscles of the ox. Dr. Bulloch made use of that fact in studying certain phenomena of heredity and he has shown that supposing a male rabbit's blood is made highly hæmolytic to ox's blood that the descendants of that male rabbit derived from a normal female have no such power, but that, on the other hand, if the blood of a female rabbit is made highly hæmolytic with the blood of an ox then the descendants of the female rabbit after connexion with a normal male have blood which is highly hæmolytic—in other words, the properties acquired by the mother are apparently transmitted but not through the germ plasma, only by the interchange possible owing to the placental circulation. You will say that there is nothing new in this and that the same facts are known in relation to human small-pox and

human rheumatism and endocarditis. The same argument may be adduced with reference to the facts of cerebral localisation. We might say that we knew all about cerebral localisation as a result of Dr. H. Jackson's masterly deductions from the study of epileptic convulsions, and that we did not need Hitzig and Ferrier's work. There is a very great difference between the precision of a result that has been obtained by an experimental method and the results of a statistical method. This confirmation by Dr. Bulloch's work of a certain part at any rate of the work of Weismann is, I think, a point of very considerable interest to us all.

Biology in relation to research, quite apart from the investigations of any particular disease, is of great interest and importance from at least these three points of view. Biology ought to be of interest to all of us, because if Darwin's views are correct we are all of us more or less engaged in trying to upset one of the fundamental laws of the universe; because, as a physiologist said not long ago, the function of doctors and the function of hospitals is to promote the survival of the most unfit and, therefore, if for no other of the reasons which I have brought before you I think for that final reason the study of biology ought to be regarded as full of interest for you all.

Finally, I will only say that quite apart from the relationship of biology to medicine the study of biology is one of the most charming hobbies apart from any direct bearing on our professional work that a medical man can engage in.

The Ingleby Lectures

ON

CHRONIC HYPERTROPHY OF THE FAUCIAL AND PHARYNGEAL LYMPHOID OR ADENOID TISSUES.

Delivered at the University, Birmingham,

BY F. MARSH, F.R.C.S. ENG.,

SURGEON TO THE QUEEN'S HOSPITAL AND LATE SURGEON TO THE EAR AND THROAT HOSPITAL, BIRMINGHAM.

LECTURE II.[1]

Delivered on June 3rd.

MR. DEAN AND GENTLEMEN,—The discovery of adenoids was primarily due to the application of the principles of the laryngoscope to posterior rhinoscopy. Although not the originator of the idea Czermak was the first practically to apply the method in 1859 and the first to see adenoids in 1860, when he published an account of a case where he had observed two small tumours on the upper part of the naso-pharynx on the left side close to the opening of the Eustachian tube, one portion of which somewhat resembled a "cock's comb." He failed, however, to grasp the true importance of the condition, as did Voltolini, though to a less extent, some five years later, when in 1865 he perceived with a rhinoscopic mirror stalactite-like growths projecting into the free cavity of the naso-pharynx. The patient, a man, aged 41 years, was under treatment for extreme deafness, which improved after the application of the electric cautery to these growths. In the same year Löwenberg published three cases of patients suffering from deafness who had a condition of the naso-pharynx similar to a granular pharyngitis. In England Andrew Clark, in the London Hospital Reports for 1865, gave a somewhat similar account of this condition in a short article on Nasopalatine Gland Disease and called attention to the presence of "fœtid cheesy masses" which, he thought, were contained in the cavities of the glands. It was, however, reserved for Wilhelm Meyer of Copenhagen in 1868 to realise the clinical importance and to give a more accurate and complete history of the condition and the name "adenoid vegetations." He made a careful microscopical examination of the structure and detailed methods of treatment. It is interesting to note that he made an examination of 2000 children in the National School of Copenhagen and discovered the condition in 1 per cent.—very different from the result of an examination recently made in England by Mr. A. H. Cheatle of the ears of 1000 school-children in the Hanwell District School, who found that out of 50 per cent. with middle-ear trouble no less than 38 per cent. had either adenoids alone or with enlarged tonsils. In 1875 Guye of Amsterdam read a paper on the subject at the International Medical Congress at Brussels and Löwenberg published a monograph in the same year. The subject was again discussed at the International Medical Congress in London in 1881, Capart of Brussels and Woakes of London taking a prominent part. This discussion was the means of directing general professional attention in England to the subject and I can remember the almost universal smile of unbelief which greeted its mention. This credulity was hardly to be wondered at, as then to most surgeons the larynx and naso-pharynx—intrinsically—were *terra incognita*, and the methods of operating, especially with the finger-nail, did not appeal to the surgical mind. Even in 1884 Sir Morell Mackenzie did not fully recognise the fact that these "adenoid vegetations" were a hypertrophy of Luschka's tonsil and analogous to the chronic enlargement of the tonsils. In vol. ii., page 490, of his book on "Diseases of the Throat and Nose" published that year, when writing of chronic catarrh of the naso-pharynx, he says: "In young subjects adenoid growths are sometimes present or there may be simple enlargement of Luschka's tonsil." His description of the appearance of adenoids, too, was not quite in accord with that of to-day, as in describing them on page 499 he says: "As a rule they are rounded in form and vary in size from a hemp seed to a currant, but are occasionally much larger and often occur in clusters." In most other points he is, however, singularly accurate. Not much advance was then made until Hartmann and Gottstein devised their ring knives or curettes. The introduction of the latter about 12 years ago rendered removal *en masse* practicable and so gave in most cases a specimen representing the actual condition instead of a number of small fragments. The frequent inspection of such specimens undoubtedly conduced to the exact knowledge which we hold to-day.

Adenoids vary in size from a small localised patch to a mass filling the naso-pharynx. Their consistence is at first softer than that of enlarged tonsils owing to a preponderance of the lymphoid over the fibrous tissue, but at the age of puberty fibrous atrophy more or less takes place and the consistence becomes more dense. This atrophic process is not invariable, as not infrequently adenoids are found retaining their soft lymphoid condition long past the age for the fibrous change. Although there is so much difference in the size and shape of adenoids it is very difficult satisfactorily to classify them. Normally, according to Lermoyez, Luschka's tonsil "consists of from four to six parallel bands, delineating a series of concentric arcs which converge behind and in front like the lips of a vulva. When hypertrophied these bands form the same number of small tongues, parallel posteriorly, and placed together after the fashion of the leaves of a book. In the recesses which separate them the muco-pus accumulates, retained by the inflammatory adhesions which partially solder their lips together and form enclosures." This arrangement of parallel ridges and furrows or recesses obtains in most cases where the hypertrophy is at all marked but varies considerably in degree. At one extreme the ridges or bands are smooth and rounded and the recesses shallow and even, the surface admirably showing the parallel arrangement; at the other extreme the recesses are deep, sometimes converted into cavities containing mucoid or caseating material, and the ridges are ragged and uneven, almost stalactite-like at first sight, but when examined maintaining the above form. Between these extremes a large number of cases are found. When fibrous atrophy has taken place the surface is often left serrated and pitted and occasionally small but distinct cavities opening on the surface are seen. The so-called Tornwaldt's bursa is simply one of the central recesses partly converted by adhesions into a cavity. In some cases a portion only of these concentric bands hypertrophies and an uneven "bossed" surface results—void of definite arrangement and involving either the central or lateral regions of the naso-pharynx or both. In these cases the lateral pharyngeal bands and the scattered patches on the posterior wall of the pharynx are often enlarged. Bearing these points in mind the following classification might be made: (1) a central form comprising (*a*) the ordinary form concentrically arranged—already described—with little or no lateral hypertrophy and (*b*) a

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central boss or pad, the prominent symptom being impeded nasal respiration; (2) a lateral form with hypertrophy of the lateral bands most marked and often extending into the fossa of Rosenmüller, deafness being the prominent symptom; and (3) a diffuse form with a general and irregular hypertrophy of all the lymphoid tissues in the naso-pharynx and pharynx, seldom attaining any great bulk, the prominent symptom being catarrh. The symptoms, however, depend almost as much upon the size as upon the position of the hypertrophy. They may be arranged in three groups—(1) obstructive, (2) catarrhal, and (3) reflex. 1. The obstructive symptoms are caused mechanically by the enlargement wholly or in part occluding the openings into the nares and Eustachian tubes and causing nasal obstruction and deafness, and a muffled or "dead" voice. 2. The catarrhal symptoms are due to the great suitability of the recesses as nesting places for the catarrh microbe—even more so than in the case of the tonsil. With any diminution of tissue resistance the microbe gets the upper hand. The attack may remain a localised one, causing adenoiditis and temporarily increasing obstructive symptoms, or it may extend to the nasal regions causing rhinitis, along the Eustachian tubes to the middle ears setting up an acute or subacute catarrhal condition with myringitis, or it may travel downwards to the tonsils, larynx, trachea, bronchi, or gastro-intestinal tract according to the degree of tissue resistance and predisposition of the child. There is a great tendency for these attacks to become chronic and difficult to cure. Toxin generated by the microbes may be absorbed by the lymphatics and cause enlargement and tenderness or suppuration of their associated cervical glands—the parotid set—just as in the case of the tonsils. 3. Reflex symptoms are more often due to adenoids than to enlarged tonsils. Instances of headache, cough, spasm of the glottis, asthma, and sneezing have come under my notice. More remote ones—convulsions, epilepsy, stammering, and incontinence of urine—have been attributed to adenoids, but I cannot recall any case in my own experience that I could definitely put down to them. The following cases are instances.

CASE 1.—The patient, a girl, aged 15 years, was brought to me on May 7th, 1901, for daily frontal headaches. She was unable to breathe through her nose during sleep, which was never refreshing, and she was slightly deaf with colds. On examination she had marked adenoids. Their removal under ethyl chloride afforded complete relief.

CASE 2.—A child, aged four and a half years, was seen by me with Dr. B. F. Jordan on May 19th, 1901, for attacks of spasm of the glottis, which commenced on May 15th, a sequel of a catarrhal tonsillitis and adenoiditis. In August, 1899, some 18 months previously, she had been operated upon by a surgeon for enlarged tonsils and adenoids causing obstruction to respiration. The spasms were very severe and alarming and a trained nurse had to be with the child at night. On examination both tonsils were hypertrophied, especially the left; the surface was very ragged and there was evidently a recurrence of the adenoids. As the catarrhal condition had subsided and the child was otherwise well operation was advised and it was performed on the following day; a large mass of adenoids was removed with the bulk of the tonsils. There was no return of the spasm and the child has been strong and well since.

CASE 3.—A boy, aged 12 years, was brought to me on account of frequent catarrhal and asthmatic attacks which kept him indoors at home most of the winter. There were no obstructive symptoms but adenoids were found to be present on rhinoscopic examination. These were removed on Jan. 8th, 1901. His mother informed me a few months ago that he had been quite free from asthma since.

CASE 4.—A child, aged about six years, was sent to me by Dr. G. Haddow for incessant sneezing—every few seconds—except during sleep. She was not a neurotic child but was very placid and tractable, and she allowed a thorough inspection of both nose and throat. Her tonsils were enlarged and adenoids were present, but I was inclined to think that the reflex must be due to some intra-nasal irritation although I could not find any hyper-sensitive area. I therefore applied trichlor-acetic acid to the upper area of the septum nasi on both sides and ordered a menthol ointment. This made no difference, so about a week later, as the child was becoming exhausted, a tonsil and adenoid operation was performed. This was immediately followed by complete cessation of the sneezing.

Adenoids if neglected often seriously affect the development of the oro-nasal regions, the thorax, and that of the body generally. The development of the posterior nares is sometimes arrested, probably where adenoids have been present at birth or quite early in life. I have noticed that in some cases the arrest has been more marked on one side than on the other. The naso-pharynx in these cases is generally similarly affected, being shallow and small. In some cases, on the contrary, the adenoids seem to have an expansile action, and alter the shape of the posterior nares, the upper margin losing its ovoid character and becoming angular like an inverted V. The adenoids occupy this angle and increase the nasal obstruction. This condition is most often found in older children—from 10 to 16 years old. More rarely the growth of the soft palate is impeded, and when the adenoids are removed it cannot be approximated to the posterior wall of the pharynx, consequently the voice after operation is of a very nasal character. One such case has happened in my practice in a girl, aged seven years, who was operated on some years ago. The cleft palate kind of voice was most disagreeable and a source of anxiety to the parents. I heard a short time ago that the voice had improved but little. The anterior nares and nasal meati are often narrow and the alæ nasi collapsed—from disuse and atrophy of the dilator naris.

When nasal stenosis to any marked degree exists the growth of the superior maxilla is much interfered with and assumes an almost characteristic shape. The hard palate becomes high and arched, narrowed in front almost to a point—the V-shaped jaw. As a result the teeth have insufficient room, the upper incisors overlap, and the canines are crowded out, appearing in front or behind their proper position. The excessive arching tends to diminish still further the lower nasal airway. The mouth is constantly open and the upper lip is drawn up, leaving the upper incisor teeth uncovered. Narrow nostrils with marked depression round the alæ nasi, open mouth displaying overlapping teeth, and drooping lower jaw combine to make an almost typical facial appearance. The teeth, too, from constant mouth-breathing seem more prone to caries, alveolar abscess, and chronic pyorrhœa. The effect on the thorax, especially when enlarged tonsils co-exist, is very marked; the lungs are never properly expanded, the thorax remains narrow and contracted, the cartilages of the ribs fall in on each side of the sternum, and the lower piece of the sternum is drawn inwards by the action of the attached fibres of the diaphragm. The child is pigeon-breasted with a deformed sternum. The general development of the child is bad; it is stunted in growth and has little muscle power. From this cause it is, given a slight exciting cause, much more liable to acquire such deformities as lateral curvature of the spine. The sleep of these children is seldom good; they are restless, turning about during half the night with the bed-coverings thrown off, and the neurotic type are the victims of frequent night terrors. The mental condition is also often unsatisfactory, especially when both nasal obstruction and deafness are present. The child becomes listless, capricious, irritable, inattentive, unable to concentrate his attention upon his lessons, and if possessing the typical facial aspect looks stupid and vacant. Slow, if any, progress is made in education and the child is often punished for inattention, though perhaps less so now that many teachers are fully alive to the possible cause. This condition was attributed by Guye of Amsterdam to interference with the lymphatic channels passing from the meninges to the nasal fossæ and termed "aprosexia," but no anatomical evidence in support of his view was adduced. I have myself only seen these cases of "aprosexia" in association with deafness and nasal obstruction, which are quite sufficient in themselves to cause the condition. A limited hypertrophy only would block the lymphatic channels and the condition would be almost universal instead of limited to a certain group. In the majority of cases the history given is that the child has the mouth constantly open, snores at night, frequently catches feverish colds, is then somewhat deaf, complains of earache, and does not "get on" well, and, as Lermoyez graphically points out, is always being told to shut the mouth and blow the nose—the two things that cannot possibly be done. The mother or a friend has often now diagnosed the condition in advance, and the diagnosis is not only made in drawing-rooms of mansion or villadom but in the doorways of byways and courts. It is a common thing for a child to be brought to the hospital to have "them things" taken out of his throat, as he is just like Mrs. Somebody's child who has recently had his "took out" and inferentially improved thereby. A difficulty which the

specialist has to contend with now is to convince some parents that adenoids are not the cause of their children's deficiencies, and I intuitively feel that occasionally they go away unconvinced and will not rest until they have found someone who will take a view in accord with the opinion of the lay authority who first implanted the idea that the slight mental or physical imperfection is due to adenoids.

Although in most cases the symptoms alone are fairly conclusive, a careful examination, including the anterior nares and the ears, should always be made. I have seen one or two cases of deafnesss attributed to adenoids, due simply to an accumulation of cerumen. The presence or absence of incurvation of the drum is an important diagnostic point. Whenever there is deafness it is a good plan to inflate the middle ears with a Politzer air bag, both to show how much of it is due to defective aeration and to enable a more reliable prognosis to be given.

Nasal obstruction, from hypertrophic rhinitis, deflection of septum nasi, mucous polypi, &c., or more rarely from a naso-pharyngeal polypus, sarcomatous growth, or meningocele, forms the common source of errors in diagnosis. I have only met with one case of meningocele, which occurred in my hospital practice, and was diagnosed by digital examination and under general anæsthesia, and two or three cases of sarcoma of the naso-pharynx. Some of these conditions, all in fact but naso-pharyngeal ones—may coexist with the adenoids, and if not recognised and treated may prevent the full success of the adenoid operation. Having eliminated causes of error in ears and anterior nares, the naso-pharynx should be examined to make the diagnosis absolute. Digital examination should *not* be the routine method. It is very unpleasant and alarming and is only called for in the few badly trained and unmanageable children who make any other method out of the question and in a few with an excessive tongue reflex. I have to employ it now in a very small percentage of cases. My experience with children is that they are quite as tolerant of examination by posterior rhinoscopy as are adults, and that, as a rule, there is no difficulty in obtaining a sufficient view of the naso-pharynx with a small mirror to show if adenoids are present. In estimating the size of adenoids by this method it must be remembered that they appear much less than they really are owing to the necessary obliquity of the rays of light reflected from the mirror. The size of the tonsils is sometimes an impediment to the introduction of the mirror, but when this is the case adenoids are almost certain to coexist, and as tonsillotomy is necessary the question can be determined and dealt with when the child is under an anæsthetic for this purpose.

The diagnosis having been made absolute, the next and all-important question is that of treatment and this is determined by the symptoms rather than by the actual size of the adenoids. Is an operation necessary or advisable or may the case be treated by other and milder measures? Operation is in my opinion necessary or advisable for any one of the following conditions: (1) aural symptoms—deaf-mutism, catarrhal or suppurative middle ear trouble, and temporary deafness from defective middle-ear aeration; (2) distinct nasal obstruction, especially if impeding development; (3) frequent and chronic catarrhal attacks interfering with health and education; (4) cervical adenitis associated with adenoiditis; and (5) reflex conditions unrelieved by treatment for which there is no other apparent cause. It is often advisable for improvement of the singing voice in older patients apart from other symptoms. Milder measures may be adopted, when both adenoids and symptoms are slight in children near the age of puberty—when fibrous atrophy may soon take place and the nasal cavities enlarge—and should be adopted for cases where symptoms are absent although adenoids are distinctly present. In these cases cleansing and astringent solutions may be applied locally, with irrigator, spray, or brush. Borax and salt, five grains of each dissolved in two ounces of warm water, is an unirritating and simple wash. Carbolic acid should not be routinely used, as it tends to impair the sense of smell. After the wash an astringent spray should be used (post-nasal) of chloride of zinc, glyc. tannic acid, hydrastis, alum, &c., as strong as can be tolerated, or the solution may be applied directly by means of a cotton wool applicator in the more tolerant children. Internally iodine, iron, cod-liver oil, and hypophosphites are the standard remedies. It is in these cases, too, that systematic nose-breathing exercises may be employed with a reasonable expectation of benefit. A sojourn at the seaside or on moorland will often do more than all these remedies and will be much pleasanter to the patient.

It is instructive to follow the history of the operation. The galvano-cautery was applied by Voltolini and others in a very vague manner to a few cases before the clinical significance of the condition was recognised, but the first definite attempt at complete ablation was made by Wilhelm Meyer with the ring knife devised by him. This was passed through a nostril and forcibly applied to the adenoids with or without the guidance of a finger in the naso-pharynx. The shank of the knife was flexible and could be bent to any desired curve. This method, suitable though it might be for slight diffuse adenoids, must have been very unsatisfactory for those of any bulk—in fact, I should say that it was impracticable thoroughly to ablate them. This difficulty must have been generally felt, for about the same time Löwenberg and Solis Cohen devised forceps for introduction through the mouth into the naso-pharynx. With these small bits of adenoid tissue were cut or pulled out, the procedure taking a considerable time. About this time the finger-nail was advocated, and, I regret to say, adopted, by some English specialists. The crushing and hæmorrhage would perhaps produce some temporary improvement, but a satisfactory result would only obtain in those slight cases where an operation was not needed. To assist those with a weak and feeble finger-nail Capart devised a steel one—doubtless less septic and more effective but never efficient. Numerous varieties of forceps now began to appear; apparently almost every specialist deemed it incumbent to devise an instrument or to modify and to endow someone else's with his name. An advance in the technique was made by first removing as much as possible with forceps and then applying the steel nail to clear the surface of débris—thus leaving it less ragged. Hartmann's ring knife or curette marks the next advance. It was not altogether unlike Meyer's altered and adapted for use through the mouth. The cutting edges were on the upper and posterior surfaces. After introduction behind the palate the blade was passed along a lateral wall of the pharynx until the vault was reached. It was then pressed against this and the posterior wall and swept a few times from side to side, care being taken not to give the blade a lateral deflection. This, either alone or preceded by the use of forceps, was the quickest and most satisfactory method until the introduction of Gottstein's ring knife a few years later. This differed from that of Hartmann in being shaped to cut through the adenoid tissue from before backwards instead of laterally. It gradually took the place of Hartmann's, but, like the forceps, it has been the source of many modifications, chiefly in the curve of the shaft and the inclination of the cutting edge. Of other instruments an adenotome made after the principle of a tonsil guillotine has been devised by Schutz, but though ingenious it is only suitable for central masses of fair size and it has never come into popular use. Trautmann's curette is practically a Volkmann's spoon with a suitable curve in its shank and is suitable only for scraping small diffuse patches in adults. The same may be said of the galvano-cautery, although several ingenious curette loops and points have been devised. The cold wire snare is, in my opinion, useless and should never be used.

The apparent simplicity of some of these methods was mainly responsible for the idea that invaded the minds of the profession that removal of adenoids was devoid of risk and could be undertaken without any special experience. The result of this was shown by the publication of statistics in 1896 reporting 11 deaths in England alone in a little over two years during operations under chloroform for removal of adenoids and enlarged tonsils, and by a decided increase in the number of disappointing results from incomplete operations.

The mortality of the operation should be *nil* and probably would be if both the anæsthetist and the operator had special experience or even if one only had experience. A skilled anæsthetist will steer the inexperienced operator safely through the operation, and a skilled operator will prove a safeguard to the inexperienced anæsthetist. It is the combination of inexperience that produces the mortality.

Incomplete operations—much to be deprecated, as they bring a most useful operation into discredit—are due chiefly to want of method. Using forceps or scraping with a curette hither and thither without method until no more tissue comes away is neither a desirable nor an efficient procedure. An anæsthetic should always be given. In children I prefer chloroform given by the open method, by which I mean dropping chloroform from a drop-bottle on to a *single* fold of towel, flannel, or lint, shaped to fit over the mouth and nose

after Lister's plan, or stretched over a mask like Schimmelbusch's. The drops should be gradually increased in frequency and should cover a greater area of the lint, until the conjunctival reflex is quite abolished. At this stage the laryngeal reflex is unaffected, and there is no danger from suction of blood or débris into the air-passages, whilst ample time will be given for the operation. Should further administration be necessary—which should seldom be the case—the back of the throat must be well mopped out with lint swabs and the face turned well to one side, so that any blood may run out of the mouth. Care is needed now not to press the anæsthetic unduly, as it is more important than before not to interfere with the laryngeal reflex, as blood-clot formed in the interval in the naso-pharynx may easily be drawn into the larynx and air passages. I have never had a death or witnessed one at this operation, but I think it highly probable that some of those reported may have been due to this cause. If preferred by the anæsthetist ether or ether and chloroform may be given, either by the open method or inhaler, the same precautions being taken. To older children and adults nitrous oxide gas may be given if the case is a simple and uncomplicated one. The drawbacks to it are that one cannot tell beforehand quite what length of anæsthesia will be obtained, and in some cases jactitation causes difficulty and delay. In the majority of cases there is sufficient time for a thorough clearance to be made. Gas and ether will afford much more time and may be employed if it is thought that extra time may be wanted. An experienced administrator is a *sine qua non*.

Kelene or ethyl chloride bids fair to supersede gas. It has been administered for me by Dr. W. J. McCardie in 20 cases, chiefly those of young adults. It has given on the average about two minutes of anæsthesia and analgesia. Its advantages over gas are the longer time given and the absence of congestion and cyanosis. Recovery from its influence is quite as rapid and the patients are able to walk back to bed. No troublesome after-effects occurred in my own cases. When it has been more extensively used I believe statistics will show it to be much safer than chloroform or ether. No death from it has as yet occurred in this country and it must have been given to approximately 1000 cases. The following table of 1000 cases shows the number of chloroform and gas administrations to children 16 years old and under.

Table showing the Number of Administrations of Gas and of Chloroform to Children 16 years of age and under in a Series of 1000 Cases.

Age.	Gas.	Chloroform.	Number.
In the first year of age ...	—	8	8
„ second „ ...	—	17	17
„ third „ ...	—	48	48
„ fourth „ ...	—	74	74
„ fifth „ ...	1	104	105
„ sixth „ ...	1	75	76
„ seventh „ ...	2	69	71
„ eighth „ ...	8	47	55
„ ninth „ ...	5	46	51
„ tenth „ ...	11	42	53
„ eleventh „ ...	16	21	37
„ twelfth „ ...	30	27	57
„ thirteenth „ ...	32	17	49
„ fourteenth „ ...	27	14	41
„ fifteenth „ ...	30	4	34
„ sixteenth „ ...	33	6	39
	196	619	815
Over 16 years of age	—	—	184
One case—14 weeks old—no anæsthetic	—	—	1
Total	—	—	1000

After trying many methods of operating I have adopted the following as being both rapid and efficient. The patient is placed in the recumbent position, with the head and shoulders slightly raised on a low pillow. I have adopted this in preference to "the head over the end of the table" position, finding that the hæmorrhage is less and not a source of trouble, whilst the head is steadier and in a better position both for the anæsthetist and the operator. The desired stage of anæsthesia having been reached the mouth is opened with a suitable gag on the left side. A large size slightly curved Gottstein curette is introduced behind the palate, the handle being held firmly in the fist—dorsum upwards—and not as a scalpel or pen; the blunt edge is kept well against the septum and passed upwards to the pharyngeal vault until slight resistance is felt by the cutting edge meeting the adenoids; firm pressure is made for a moment, and then a quick *tour de main* is made, taking the handle upwards and the blade downwards. This makes a clean section of the adenoid mass and brings it, if of any size, into or outside of the mouth. The curette is quickly reintroduced and a supplementary sweep is made with it on each side to clear away any lateral fringe. An examination is now made with the finger to ascertain if the removal has been complete, if so, the tonsils are quickly removed, unless from their size it was necessary to remove them before the adenoids, and the child is turned well over on to his side to allow the free escape of blood through the mouth. This might be termed the normal operation and its success depends chiefly on the proper engagement of the adenoids. If the curette is not kept well up to the septum an anterior fringe is very apt to be left, whilst if the curette is too small crushed lateral pieces are left which may escape the supplementary lateral curettement. I use a No. 3 size Gottstein for all small children and larger sizes for the older and bigger ones. The *tour de main* is largely a matter of practice, but when once acquired it can be accomplished with exactness and celerity. If examination with the finger shows that removal is not complete the curette must be used again or a small pair of Jurac's or StClair Thomson's forceps may be substituted. A small-sized Hartmann's curette is often useful to clear lateral processes from Rosenmüller's fossæ and Meyer's ring knife is the most efficacious for clearing fringes extending into the inverted V-shaped nostrils. The examination by the finger should always include the posterior nares and the condition of the posterior ends of the lower turbinateds should be noted. If they are much hypertrophied, which is seldom the case in children, it may be advisable to deal with them at once by snare or otherwise according to the condition.

The risks of the operation, apart from a fatality at the time which I have already dealt with, are slight. Hæmorrhage is sometimes profuse, especially if the lateral plexus of pharyngeal veins is wounded, or the mucous membrane torn away, but it rapidly ceases after the operation is finished. Recurrent hæmorrhage is very rare. I have only had one case and that was in a hæmophilic patient who had not thought it worth while to mention the fact. Secondary hæmorrhage, too, is as rare. I have only had one case, in a child, aged six years. This occurred on the fifth day after removal of the tonsils and the adenoids and was very severe, a large quantity of blood being lost. I saw the child the day afterwards with Dr. G. St. Johnston and found that the bleeding had not come from the tonsils. Chloride of calcium was given, rest in bed and suitable diet were ordered, and no further bleeding took place. Sepsis is another danger, but should not occur if proper septic precautions are taken as pointed out in the last lecture when speaking of tonsillotomy. Earache culminating in some cases in acute otitis media may be due to sepsis, injury to the tubal orifice, exposure to cold, imperfect removal of the adenoids, and injudicious syringing and irrigation after operation. A slight febrile condition lasting for 10 days or longer is generally caused by inflammation of remnants of adenoids or laceration of the mucous membrane.

At the conclusion of the operation the patient should be at once removed to bed, the head and shoulders being raised, and encouraged to sleep. The parents or friends—if a nurse is not in charge—should be warned that some blood swallowed at the time of operation will be vomited or they may be much alarmed. Cool or lukewarm fluids only should be given on the first day and soft milk foods on the two days following, the patient remaining in bed for this time. An aperient should be given if necessary on the second day. If on the fourth day the temperature is normal the patient may be allowed up but should be kept quiet in an even temperature and on light diet for a full week from the date of operation.

The degree of pain experienced after operation is very

variable. For the first few hours there is a good deal of soreness and pain, often referred to the ears and not to be confounded with earache, and some headache. If this is severe a few doses of phenacetin will give relief. Subsequently pain is only felt on movements of deglutition and is but slight after the third day. No local after-treatment is necessary or advisable unless febrile symptoms develop or if the naso-pharynx and nose are stuffy and the breath is offensive. Then a cleansing alkaline wash (borax, three grains to one ounce) may be gently sniffed or syringed through the least free nostril and a powder of aristol and boric acid insufflated. If there is earache gentle inflation of the middle ears with a Politzer air-bag after the cleansing will give relief and may prevent further mischief.

Should sepsis by any chance occur more vigorous treatment will be required. Cleansing antiseptic washes or spray must be frequently used and followed by insufflations of aristol into the naso-pharynx. A look-out must be kept for septic pneumonia or other complications and suitable constitutional treatment must be employed.

When the patient is convalescent nose-breathing exercises should be carried out for a time to hasten the restoration of this function in those cases where it has been in abeyance. If there has been previous middle-ear trouble regular inflation with Politzer's air bag is generally advisable for so long as any improvement is obtained by its use. A course of iodide of iron is often of much benefit and a few weeks at the seaside is most desirable if it can be managed.

Disappointing results after operation occasionally happen, but if a careful examination is made both before and at the time of operation the disappointment may be foreseen and the parents prepared for it. For instance, anterior nasal stenosis, chronic otitis media, perforated and cicatricial membranes, &c., should be diagnosed at the prior examination and allowed for in the prognosis. A guarded prognosis, too, should be given in all cases where the operation is undertaken for reflex symptoms. However probable it is that adenoids are the cause of the reflex in no case can it be said that their removal will effect a cure. Another source of disappointment is found in those cases where the symptoms prior to operation were in part due to a general catarrhal tumefaction of the mucous membrane. This will recur with each fresh cold and produce similar but perhaps not quite such intense symptoms. Atresia or arrested development of the posterior nares, a shallow naso-pharynx, hypertrophy of the posterior ends of the lower turbinateds, projecting vertebræ, undue projection of the Eustachian prominences (which I have seen occupy quite half the space in the naso-pharynx) will be found either before or at the time of operation and their bearing on the result should be explained.

A faulty operation is perhaps the most common cause of failure. If incomplete the persistence of the symptoms is attributed to recurrence—a great saving clause. If, on the other hand, mucous membrane is torn away or stripped down patches of granulation tissue will form, and if extensive may become exuberant and simulate a recurrence. I well remember some 10 or 12 years ago reading in a medical journal (I cannot recall the reference) a report of three cases where in spite of a clearance *down to the periosteum* a recurrence had taken place. I felt no doubt that the recurrence was a mass of granulation tissue.

A more remote cause of non-improvement of hearing is the occurrence of adhesions between the Eustachian prominence and posterior wall of the pharynx. In some cases I have found Rosenmüller's fossæ almost obliterated. The occasional voice defect from inability to approximate the palate to the posterior wall of the pharynx has already been referred to.

True recurrence is very rare. One can conceive of flat patches but little hypertrophied escaping the forceps or ring knife and subsequently enlarging but I fear that a faulty operation is the reason for most of them.

Of all operations complete removal of adenoids in suitable cases gives the most gratifying and successful results—results apparent to all brought in contact with the child—and it behoves us therefore to exercise every care to prevent disappointment by a careful examination beforehand and by a methodical and thorough operation.

THE Sheffield Watch Committee has decided to memorialise the Home Secretary, states last week's number of the *Local Government Chronicle*, to confer powers on some responsible authority to prohibit parachute performances.

THE RELATION OF VITAL STATISTICS TO SANITARY REFORM.[1]

BY ARTHUR NEWSHOLME, M.D., F.R.C.P. LOND.

THE subject on which I have been asked to address this Conference demands a definition of both vital statistics and sanitary reform. Sanitary reform is, I think, best defined by a statement of its objects, which are to enable man to reap the full harvest of his years of life and to diminish, and as far as possible to remove, the sicknesses and accidents occurring in the course of his life, thus improving its quality besides increasing its quantity and bringing about the realisation of the vision of the prophet Isaiah: "There shall be no more thence an infant of days, nor an old man that hath not filled his days; for the child shall die a hundred years old." Vital statistics are the collected and accurately presented facts concerning the human lives of communities. They deal with everything that concerns their welfare or has any bearing on the conditions of health or duration of life of their individual members.

The opinion has been expressed that our national system of vital statistics inaugurated in the first year of Queen Victoria's reign has been the active cause of all the sanitary progress that has followed. Without agreeing with this to the full extent it is certain that the periodical publication of our annual death returns, tabulated according to locality and according to age, sex, and causes of death, has given an enormous impetus to the adoption of measures calculated to diminish sickness and has hastened the adoption of these measures.

HISTORY OF STATISTICS BEFORE NATIONAL REGISTRATION.

Our national history before the Registration Act of 1837 came into operation furnishes striking instances of its necessity. The first parish registers of deaths were kept in England in 1538; and the "Bills of Mortality" were published towards the end of the same century, in order to quiet public feeling by giving a correct account of the progress of the plague. The supposed cause of death was after a while inserted in the registers, but ages were not added until 1728. Hence when Dr. Halley was studying the probabilities of life at every age and preparing his paper[2] which laid the foundation of life assurance he found it necessary to utilise the statistics of Breslau in Silesia, that being then the only place in which a record of the ages of the dead was kept.

Dr. Price nearly a century later published a life-table based on the experience of one parish forming nearly half the population of Nottingham during the years 1735–80, and this table was used by insurance societies as the basis on which they calculated the annual premiums payable by insured persons and by the Government in calculating annuities. It was subsequently found that, there being a large number of Baptists in Nottingham, the church registers were very deficient and that the average lifetime in Nottingham was 30 and not 24 years as given in the table. The insurers in insurance societies were therefore paying premiums which were extravagantly high, while the Government was granting annuities at a rate which would speedily have rendered bankrupt any private business concern. Before the error was detected two millions sterling of the country's money had been lost on annuity transactions—a loss which might have been avoided had there been a national registration of births and deaths and a periodical census such as are now in operation. No better example of the risk incurred by substituting conjecture for inquiry could be adduced.

PARISH REGISTERS.

But although national registration was not established until 1837, records of local mortality in the parish registers, possibly not complete, had been previously utilised by medical and sanitary investigators. Thus in Manchester the death-rate in the middle of the eighteenth century was stated to be 1 in 25, in 1770 it had become 1 in 28, and in 1811 had fallen, if the records be trustworthy, to 1 in 74, while in Liverpool in the same year it was 1 in 30 and in Birmingham

[1] An address to the Conference on Sanitary Reform to celebrate the jubilee of the Manchester and Salford Sanitary Association, April 24th, 1902.

[2] Philosophical Transactions, No. 196, year 1693.

1 in 34 of the population.[3] Contrast these figures with the more recent, though still unfavourable, experience of Manchester. In 1841–50 and again in 1861–70 its death-rate was 1 in 30; in 1899 it had fallen to 1 in 42.

CHOLERA AS A SANITARY REFORMER.

The most potent influence in support of the efforts of the early sanitary reformers was cholera. So far from being an unmixed evil in this country cholera may not improperly be regarded as *facile princeps* as a motive power towards sanitary reform. In 1831–32 this disease caused 41,544 deaths in Great Britain and Ireland; and it is not surprising that local boards of health were during 1831 formed voluntarily in many parts of the country and that spasmodic, though very imperfect, efforts were made to sweep the Augean stables of insalubriousness. In connexion with these efforts the necessity for a complete registration of deaths became more evident and happily a political movement among Nonconformists hastened its adoption. Nonconformists were agitating in favour of a law that should enable the births, marriages, and deaths of all persons in the United Kingdom to be duly registered by the State and not exclusively by the Church as established by law.

NATIONAL REGISTRATION AND ITS EFFECTS.

The office of Registrar-General of Births, Deaths, and Marriages in England was created in 1836. The first report of the Registrar-General was published in 1839, and to this report Dr. W. Farr contributed the first of that long series of essays which have been the basis of the science of vital statistics in this country. In these reports the mortality of every district throughout the country has been the subject of analysis. The attention of local authorities has been compelled to any special incidence of deaths in their districts. Medical officers of health have been created throughout the country, one of whose chief duties is to draw forcible attention to the local incidence of deaths and to recommend measures tending to decrease the sickness and death-rate. Where the local supervision has been lax or the medical officer's recommendations have not been carried out the Registrar-General's periodical returns have enabled the medical staff of the Local Government Board to intervene and to investigate any local outbreak of fatal disease. The publicity given to the Registrar-General's weekly, quarterly, and annual reports has evoked a spirit of inquisitiveness and even of emulation throughout the country; and although the comparison of death-rates of great towns with each other, particularly for short periods, is fraught with fallacies the general result of the publicity secured and of the consequent efforts on the part of local authorities has been an immense improvement in the public health of the community. It cannot, for instance, be without effect in stimulating the City Council of Manchester to greater efforts that the future life-time of males in the community under its control based on the experience of 1881–90 was 28·8 years in the township and 34·7 years in the whole city, as compared with 40·7 years in London and 43·6 years in Brighton. Such an important statement would be impossible without accurate data as to both deaths and population. Nor can it be uninstructive that the mortality of textile workers at ages between 25 and 65 years is 11 per cent. higher than that for all occupied males; that such workers "die more rapidly than do occupied males generally" from rheumatic fever, from diseases of the nervous and respiratory systems, and from affections of the digestive organs other than the liver; there being an excess also under the heads of consumption and heart disease; and that, furthermore, at ages over 35 years the death rates of Lancashire cotton operatives are higher than those of cotton operatives in the aggregate.[4]

These instructive examples might be multiplied indefinitely. While guiding us into the channels in which the greatest scope for, and possibilities of, improvement exist our vital statistics furnish us with encouragement in view of what has been already achieved. Nothing can be more gratifying than the disappearance, under conditions of diminished overcrowding and increased domestic cleanliness, of typhus fever from our national death-returns in all parts of the country except in a few corners of Lancashire and very rarely in London. Our statistics also show how typhoid fever has steadily declined in districts in which a complete water-carriage system of removal of excrement has been adopted; how it is more prevalent where pail closets than where water-closets are in use; and much more prevalent still where privies and privy-middens remain, notwithstanding our accumulated experience in condemnation of them.

The series of reports issued from the Registrar-General's office during his tenure of office from 1838–80 by Dr. Farr are not only classical contributions to vital statistics but have had an immense influence in promoting the public health; while the later reports by his successors, Dr. W. Ogle and Dr. Tatham, formerly medical officer of health of Manchester, are of even greater importance in view of the increasing accuracy of our national records of causes of death. As eloquently said by the late Sir B. W. Richardson, speaking of Dr. Farr's reports, it is now no longer true that pestilence walketh in the dark. It is measured and registered, walketh at last in the open day.

FALLACIES OF FIGURES.

That numerical tests of progress and numerical comparisons of experience are beset with fallacies scarcely needs emphasising. There are no witnesses more pliable than figures and they are frequently misused. The results of experience cannot, however, be stated except on an actual or implied numerical basis; and statistics merely present the collected experience of a number of persons. If inaccurately collected, if used in a manner which breaks elementary rules of arithmetic or logic, the fault lies not with the statistics but with their manipulator; and the remedy lies not in the disuse but in the corrected and extended use of accurate statistics.

INSUFFICIENCY OF DEATH REGISTRATION AS THE BASIS OF PREVENTIVE ACTION.

Experience soon showed that registration of deaths gave a very imperfect view of the prevalence of disease and that so far as communicable diseases were concerned invaluable time was lost when preventive action could only be taken after the registration of the patient's death. Preventable diseases from the viewpoint of administrative public control need to be divided into three groups: (1) those in which the chief danger lies in contact between the sick and the healthy—e.g., small-pox, measles, whooping-cough, scarlet fever, and diphtheria; (2) those in which, although contact between the sick and the healthy is the chief danger, this danger arises particularly under conditions of overcrowding, dirtiness, and general neglect—e.g., typhus fever, typhoid fever, and consumption; and (3) those in which the removal of nuisances and allied conditions, and particularly the prevention of the admission of excremental and other putrefiable matters to food, will diminish, and may even annihilate, disease—e.g., typhoid fever and diarrhœa. For diseases under the first heading our only present hope, with the happy exception of small-pox, lies in early knowledge of every case and every suspected case and the immediate institution of measures of isolation, disinfection, &c. For diseases under the second heading early prevention of the spread of their specific contagia is equally necessary, but along with this the opening out of insanitary areas, the removal of back-to-back houses or their conversion into through houses, the rigid enforcement of efficient building by-laws, the prevention of overcrowding, and the promotion of a high standard of domestic cleanliness are equally important. For diseases under the third heading the municipal supply of pure water has done wonders in the absence of notification of cases, though the latter is a valuable means towards the execution of further measures. A pure milk-supply, the forbiddance of the sale of shell-fish from sewage polluted estuaries, and allied measures are capable of effecting a still greater amount of good. In regard to all the above groups of diseases notification of all cases to the medical officer of health is the finger-post which indicates the places where sanitary investigation and action are peremptorily required.

VOLUNTARY SYSTEMS OF NOTIFICATION.

The association in connexion with which this meeting is held can claim to have been one of the earliest to organise a voluntary system of notification of various kinds of sickness and to have, unlike other districts in which similar attempts were made, carried this out successfully for a considerable number of years. This organisation I have described elsewhere[5]; it has also doubtless been described in your proceedings by Dr. Arthur Ransome, its pioneer, as it is an

[3] Elements of Medical Statistics, by F. Bisset Hawkins, M.D., p. 19, London, 1829.

[4] Dr. J. F. W. Tatham, Decennial Supplement to the Fifty-Fifth report of the Registrar-General, 1881-90, vol. ii., p. 70.

[5] A National System of Notification and Registration of Sickness, Journal of the Royal Statistical Society, vol. lix., Part 1.

important and epoch-making section of the history of the Manchester and Salford Sanitary Association and I need not, therefore, give further details in this paper. Like other unpaid voluntary systems it gradually failed from continued lack of support.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

With the failure of voluntary notification the conclusion was gradually reached that the compulsory notification of infectious diseases was the most urgent branch of a national system of registration of diseases; and this came into operation in a characteristically British fashion. Between 1877 and 1887 a large number of enterprising local authorities applied for, and obtained, the necessary powers securing the compulsory notification of the more important infectious diseases. In 1888 an important step forward was, under the leadership of Dr. Tatham, taken by the medical officers of health of 33 towns in which notification was then in force, an arrangement being made for a weekly exchange of returns of the notifiable diseases, thus enabling forecasts of, and preparations against, the importation of disease to be made. In 1889 the Local Government Board was induced to take over this work and this body now sends out week by week a statement of the number of infectious cases in 225 towns and districts as well as in the metropolis. In 1899 the notification of the chief infectious diseases became compulsory throughout England and Wales, and we have therefore "in the making" invaluable statistics on which it will be possible to build great extensions of our knowledge of the natural history of these diseases. This, although not the immediate object of notification, is not to be neglected. When a disease belongs to the third group previously described this wider view may with relative freedom from loss be ignored. When, however, we come to deal with the members of the first group, diseases like diphtheria, which at long intervals become widely epidemic and then die down, and diseases which, like scarlet fever, vary greatly in their natural virulence, it is only by investigations of epidemics and pandemics on a large scale that we can hope completely to unravel the tangle of conditions which determine their prevalence. Medical officers of health are not mere empiricists concerned with the enforcement of general cleanliness and of disinfection and isolation when cases of infectious disease arise. They are concerned not solely with individual cases of disease but also with the conditions producing and controlling entire epidemics. It is in this branch of their work that knowledge is as yet most imperfect, and it is largely by the accumulation of accurate and complete information as to each epidemic and inter-epidemic period, and by the collateral study of the personal and environmental conditions associated with these periods, that we hope to arrive at a less empirical and more rational conception of the causation of each infectious disease and thence of its prevention.

It is not necessary to argue before the present audience the desirability of the notification of infectious diseases. Obviously notification cannot cause any extension of these diseases and if, as already indicated, it increases our knowledge of their natural history, it may lead to conclusions of the widest utility. Furthermore, if preventive measures, whether in the removal of insanitary conditions or in the isolation of the sick, are enforced as the result of notification the prevalence of the notified disease must be to that extent diminished.

NOTIFICATION OF SUSPECTED CASES—

If notification has not accomplished all that was expected of it it is because (1) the known measures of prevention which should have followed on notification have either been neglected or been perfunctorily carried out; (2) many cases have escaped notification; and (3) frequently diagnosis is delayed and infection is spread before isolation is begun.

The failure to notify a few slight cases of diphtheria may prolong and extend an epidemic, although every precautionary measure is being taken in connexion with notified cases. Cases furthermore are often notified after being watched for several days, with the natural result that secondary and tertiary cases are common in the same household. The law in this respect is much more regardful of the welfare of cattle than of human beings. A medical man need not notify a case of scarlet fever until "he becomes aware" that it is certainly of this nature; a farmer must notify each case *and each suspected case* of foot and mouth disease or glanders. A parent need not call in a medical man for every suspected case; and if he does not he can rarely be proved to have wilfully failed to inform the medical officer of health of an infectious case, as the proof involves the assumption that he or she possesses medical knowledge; and in the absence of such proof the parent cannot be punished for keeping the case secret. This may be said to be an argument against notification; it is rather an argument for improving its machinery. Imperfect information must be better than no information.

—AND FREE MEDICAL DIAGNOSIS FOR SCHOOL CHILDREN ADVOCATED.

The time is ripe, I think, for asking for the compulsory notification of all cases in which there is reasonable ground for suspecting the existence of an infectious disease. As matters now stand children continue to attend school from a house in which a patient is suffering from "ulcerated throat," a "swab" from which might have sufficed to prove that it was really diphtheria; and so similarly for other diseases. The prevention of disease can never be effective and complete until such cases are brought to the attention of the medical officer of health and until precautionary measures are required to be carried out as soon as suspicion is aroused and before the certain diagnosis of the character of the illness. The difficulty is much greater when no medical man is in attendance. An attack of diphtheria or scarlet fever may be so slight as to cause little inconvenience. Why, then, should the parent call in medical aid? At the meeting of the British Medical Association at Portsmouth I advocated a system of free medical visitation of school children for purposes of diagnosis. Such a system would remove the parent's excuse for not calling in medical aid. It would, by securing in an increased proportion of cases early diagnosis, diminish the prevalence of infectious diseases and the diminished expenditure on maintenance of patients in isolation hospitals would probably more than recoup the fees of the medical practitioners who in their capacity as municipal officers had been called in to make a diagnosis. The insistence on a preliminary tentative notification of suspected cases of infectious disease and the provision of a gratuitous medical visit to children of the poor for diagnostic purposes are not the only necessary reforms.

EXTENSION OF SCHEDULE OF NOTIFIABLE DISEASES.

The schedule of notifiable diseases requires extension. In other words, we should revert to something nearer the original scheme of the Manchester and Salford Sanitary Association, the arrangements to be made for this extended notification being modified so that weekly returns may be obtained of diseases concerning which immediate information is not so urgent. Here again progress is being made according to the British fashion. Your medical officer of health, Dr. J. Niven, has been a pioneer in the advocacy of measures against consumption and you have in operation a system of voluntary notification of cases of this disease. In Brighton voluntary notification of consumption was inaugurated in January, 1899, and its operation has been practically free from friction and attended by good to an extent which is only limited by the number of notifications. Many other towns are following these examples and there is already advocacy of compulsory notification of this disease. My personal opinion is that the time is almost ripe for compulsory notification of changes of address of patients suffering from consumption, the compulsion only coming into operation when the medical attendant is unable to certify that there have been no recent infectious discharges rendering disinfection and cleansing necessary before the vacated rooms are occupied by a new tenant. On the desirability of the notification of pneumonia and rheumatic fever it is not necessary that I should dilate. The notification of certain industrial diseases is already an established and important fact.

ASSISTANT MEDICAL OFFICERS OF HEALTH REQUIRED.

The more extensive becomes our knowledge of communicable and other preventable diseases the more evident it is that much greater use will need to be made of skilled medical investigators. There is risk in connexion with the present stress of routine work falling to the lot of the medical officer of health of a large town that he may become and remain merely a bureaucratic administrator. In Manchester a good example has been set by the appointment of one assistant medical officer of health. Probably others will be required and other towns will need to follow your example. The gain in removal of the intimate causes of disease, in diminution of suffering, and in financial strain

on the funds of the Poor-law administration and of our voluntary and municipal hospitals will amply recoup the expenditure involved.

I have necessarily in this brief sketch of my subject omitted many questions of importance. Nor can I more than allude to the importance of securing periodical returns from friendly societies and other sickness assurance societies to the medical officer of health; to the desirability of transference of the statistical work in connexion with notification from the Local Government Board to the General Register Office. Certain steps in this direction have been already taken at the suggestion of the Incorporated Society of Medical Officers of Health.

The science of medicine, including preventive medicine, makes no idle promise to extend human life beyond its natural complete term. It will—if the proper means to this end, some of them enumerated in my preceding remarks, are supplied—conduct all who live in accordance with the principles of preventive medicine in safety to the natural boundaries of their present being; it will enable them to escape the risks of early and middle life and to ensure that their

> "Age is as the lusty winter,
> Frosty, but kindly."

To enable it to achieve this end not only is it necessary to improve the sanitary conditions of life in our cities from the standpoint of home, occupation, and municipal control, it is also necessary that every information capable of helping him in his work shall be given to the medical officer of health and his staff. He cannot make bricks without straw, he cannot forge his chain of preventive measures when half the links are missing. Possessed of this information and having secured the coöperation of an educated public he will be able to secure the maximum duration and the highest quality of life for every member of the community whose interests he guards.

Brighton.

EMBRYOLOGICAL ASPECTS AND ETIOLOGY OF CARCINOMA.

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AT a time when so much is being attempted in the investigation of the problem of the nature of cancer it may appear presumptuous on the part of an embryologist to express opinions and conclusions regarding this grave question. It has long been a subject of earnest research by physicians and pathologists who naturally are thoroughly familiar with actual facts and finds concerning carcinoma foreign to the embryologist. But hitherto the physician and the surgeon, the pathologist and the gynæcologist, have utterly failed to establish anything concerning the etiology of cancer, and without the intervention of the embryologist success may be as distant in the future as in the past.

As indicated by the above title, the present writing is intended to deal with aspects of carcinoma as they strike an embryologist, and not every embryologist but one particular investigator. At the outset it may be asked, "Is the etiology of carcinoma an embryological problem?" As the thing itself and its manifestations demonstrably fall within the province of the surgeon and the pathologist, for it confronts them almost daily, it is possibly not very clear why the problem of the nature of cancer should be an embryological one at all. It is a disease carrying with it death and destruction. On the other hand, the problems of the embryologist, as generally understood, treat not of disease but of the blossoming forth of life itself, of the phenomena which culminate in the appearance of new living beings. Death and decay would seem to be things of which from his researches the embryologist might be expected to obtain no practical knowledge. He is supposed to be concerned with "das Werden," while "das Vergehen" is beyond the scope of his researches. Would that it were so! Unless he shut his eyes to plain facts "das Vergehen" in the midst of "das Werden"—death in budding life itself—is continually before him.

The conviction, impressed upon the writer's mind from 14 years devoted to the study of the mode of the development of the higher animals, the vertebrata, is that everywhere and at any point atrophy and death may be met with in any individual life-history. Death and degeneration of cells, of organs, of organisms, of embryos themselves, are among the commonest phenomena under the eyes of the embryologist. His text-books, even his published researches, may be silent of these, for as a rule he believes himself to be solely concerned with the coming-into-being, and the opposite aspect, the decline of life, he leaves severely alone. It is not in his tacit opinion a theme of the science of embryology. This view of the problems of the science has for many years failed to commend itself to the writer and in his own researches he has endeavoured to take account of everything happening and capable of being observed during the developmental cycle, whether progressive or retrogressive.

The manifestations of life present themselves under the headings of either form and structure or function. Embryological research deals largely with form and structure or, more exactly, with the coming-about of these. And as, according to the testimony of pathologists, cancer, when it appears, is something new to the organism, a neoplasm, a foreign thing, not growing and functioning after the manner of the individual containing it, increasing by cell-division after unknown laws which appear to defy all law, carrying with it widespread destruction only comparable to that dealt out by some parasites, the phenomena of cancer would have analogies at least to many such lying within the domain of the embryologist. Cancer is something with a beginning, it increases like a developing embryonic germ by cell-division, it invades territory at first foreign to it, and it only differs from a parasitic organism in the fact that its mode of reproduction is what may be defined as asexual. And thus, because as a rule its cycle is limited to the individual harbouring it, carcinoma is something with for itself an indefinite life-cycle which is only bounded by the life of its host but which cannot be directly carried over by germs or fertilized gametes to another organism.[1] That the resemblance between the life-cycle of a cancer and that of a metazoan organism should be incomplete is natural, for the former is an abnormal product and it is in the nature of such to differ in some or other important details from the typical or normal.

The problem of the nature of cancer has long been before the writer in his investigations—in fact, ever since he learnt from the researches of Wilms[2] and others that it had been occasionally encountered along with those curious tumours, the dermoid cysts of ovary or testis, the "embryomas" or rudimentary embryos of Wilms. The latter speaks of this occasional connexion of the two—it has, according to Wilms, been observed some nine times—as a remarkable fact (p. 86) in that in an organism of one or two years of age the development of carcinoma can happen. As this relates to the presumed age of the embryoma and not to that of the individual harbouring the latter, the validity of the conclusion is not apparent. On his part the writer must reject it. For the past two years from time to time in researches upon the germ-cells observations have been made[3] which appeared to have bearings upon the nature of carcinoma. This period may not seem a long one, but beyond it lie the investigations of other 12 years, without which the standpoint of to-day would be an impossibility. If, therefore, no study of cancers underlies the present writing, the approach of the problem is not a sudden one, but it has been preceded by prolonged observation and, moreover, animal life is the same, whether it be that of a hydroid polype upon a shell of the sea-shore or that of a cancer within an individual of the human race.

The immediate cause of the present writing was as follows. In a recent paper dealing with the understudy theory of heredity in an altogether different connexion a few comments have been written upon the mode of growth exhibited by certain organisms and a comparison drawn between this and the pernicious growth of the human chorion in certain cases.[4]

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[1] It has, however, been shown by Hanau and Wehr to be possible to transplant cancer from one individual—e.g., the dog—to another.

[2] Max Wilms: Ueber die Dermoidcysten und Teratome, &c., Deutsches Archiv für klinische Medicin, Band 55, 1895, p. 1-108, 3 Pl. And also Martin: Die Krankheiten der Eierstoecke, &c., Leipzig, 1899, pp. 576-614.

[3] Ibid.

[4] The passage in question is as follows: "It should be mentioned that de Vries and Weismann have already noted the resemblance in mode of growth between the sporophyte and the colonial hydrozoa. Many of the latter also possess the indefinite unrestricted power of growth so characteristic of the sporophyte of the higher plants. As a rule, the asexual generations of the higher metazoa do not exhibit this faculty. They rarely obtain a chance of showing it, for it is their usual fate to undergo early suppression by the sexual generation.

And it was not until long after the proof had been returned that it was seen how in this comparison the key to the problem of the nature of cancer had been given away. If the pernicious growth of the chorion be in reality carcinomatous, and it is recognised [5] as such by pathologists under the names of malignant placentoma, deciduoma, chorion-epithelioma, or destructive placental polype,[6] the cause of cancer is clear as the light of day. And it has seemed desirable to offer the present essay in order that at least a warning note might thereby be uttered and an earnest attempt made to point to the futility of investigation in the direction of a cul-de-sac, such as the probable one of cancer as due to unicellular organisms. In the following the facts concerning carcinoma, as established by pathological research, such as those given in the latest edition of Ziegler's "Pathologie," will be taken for granted. It will be assumed that at the basis there is morphologically but one form of cancer, no matter how different it may appear to be in diverse localities. A cancer of the skin is naturally different from one of the stomach or liver, for it grows and increases under other conditions. Ziegler for one adduces reasons against the supposed origin of cancer from some effects of unicellular organisms, and to his objections something more can be added. It is not in the nature of parasitic maladies to lead to cellular increase, such as is characteristic of cancer, and while the phenomena of destruction possibly present themselves prominently to the surgeon and the pathologist, those of indefinite unrestricted cellular increase and multiplication most impress the embryologist. And if the source of cancer to be brought out in the course of the following be the true one any further cause is a superfluity.

The conclusions are based chiefly, but not entirely, upon researches in elasmobranch fishes [7] and to any but vertebrate embryologists there might appear to be no warrant for applying results obtained in animals so low down in the scale to man himself. But the broad outlines, the laws, and even most of the details of the development are the same in man as in the fishes, and the life-cycle of the former can be interpreted in terms of that of the latter. The starting-point goes back more than two years to the beginning of researches upon the germ-cells, and with these to the earlier work of Wilms upon the embryomas. The results of the work and of previous necessary inquiries dating as long ago as 1889 cannot be given at all in detail here. A general survey of the chief conclusions will be found in "Heredity and the Epicycle of the Germ-cells."[8] The cause of cancer is really known but not recognised. Failure to perceive the true nature of carcinoma has hitherto been due to one simple fact: the views generally, nay universally, held and taught regarding the course of the cycle of development from egg to egg are erroneous.

Were an embryologist of to-day asked what in outline was the cycle of development in one of the higher forms, say a fish, chick, or mammal, he would probably be amazed at the question. "The hen lays the egg, the latter gives birth to a new hen," and so, as Kleinenberg once remarked of something else, under the eyes of the delighted and astonished spectator the cycle is completed. This supposed cycle has never really been witnessed—for the very good reason that it does not exist. The hen neither produces the egg nor is it the chief nor even the immediate task of the latter to give rise to a new hen. As the establishment of this and of the true life-cycle have filled in the working hours of the writer during more than a dozen years it may be obvious that the production of the evidences must be beyond the limits of this short paper. At the moment a pretty big book would be required to hold them all. Indeed, no attempt will be made to prove here what the true life-cycle is and wherein its details lie; the results of previous work will be assumed and for fuller information the reader may be referred to the series of memoirs whose titles are appended.

In the higher animals, the metazoa, what is termed direct development does not, and cannot, exist. It has been found that the cycle of animal development, even of the highest forms, resembles very closely that of a fern or flowering-plant. In the line from egg to egg there are two generations, an asexual form and one which, as it is the bearer of the sexual organs, is spoken of as the sexual generation. Under prevailing views of development the line of ancestry from generation to generation is exceedingly simple—too simple, indeed, to explain the facts, so simple that Nature could not adopt it in practice were she to make the trial. It may be represented thus: egg—embryo or sexual generation—egg—embryo, &c., the egg producing the embryo, the latter when mature forming from its own tissues new eggs. This is undoubtedly one of the most impossible conceptions which ever formed part of a science. The amended cycle of development and the course of heredity are as follows: egg—larva (phorozoon, or bearing animal, or asexual generation)—primitive germ-cell—primary germ-cells—secondary germ-cells—gametes, eggs, or sperms—fertilised egg. In the line of ancestry as given here—a line which apart from the larva is one of unicellular organisms—the embryo finds no place. It arises from one of the primary germ-cells whose number is always a definite one—2, 4, 8, 16, 32, &c.—and the rest enter the embryonic body to form its sexual products. A more detailed account of this cycle will be found in the memoir upon "Heredity and the Epicycle of the Germ-cells." The four important items in the cycle are: (1) the gametes, egg and sperm, by whose union a new cycle is initiated; (2) the first product of the zygote, the phorozoon, larva, or asexual generation; (3) the primary germ-cells destined for future generations; and (4)—only important to enable the completion of the cycle—the embryo or sexual generation.

Any and every primary germ-cell, if it develop or unfold as such, normally gives birth to an embryo, and, as elsewhere indicated, the embryomas of Wilms arise, and must do so, from persistent primary germ-cells. This unfolding of a primary germ-cell is equivalent to its landing in a cul-de-sac—its powers of growth and increase and its life are thereby limited. The contrast between this and the larva or phorozoon in these respects is very striking. The latter, like the corresponding generation in plants, often possesses indefinite unrestricted powers of growth in an apical fashion.[9] In many animals there is only one apical region of growth in the larva; in the hydroid polypes there may be many such and Weismann and de Vries have already noted their powers of indefinite unrestricted growth. That which brings to a sharp and sudden close the growth of the phorozoon or larva, if there be but one growing point, is the cutting-off of this from the organism, its conversion into a primitive germ-cell, and the consequent formation of primary germ-cells from this. Normally, as already stated, the further development of a primary germ-cell results in an embryo, not in a larva.

Coming now to the primary germ-cells, upon which most of the observations of the past two years have been made, it has elsewhere been established that their number is always a member of the geometrical series: 2, 4, 8, 16, 32, &c., or 2 to the "n"th power, where "n" is one of the numerals 1, 2, 3, 4, 5, 6, &c., and that the greatest number of primary germ-cells in any embryo will be $2^n - 1$. Thus, the total number in the common dog-fish, scyllium canicula, is 128, in the male smooth skate, raja batis, 256, in the female 512, and the greatest number in the embryo of one of these 127 (in scyllium), 255 (in the male skate), and 511 (in the female skate). But for convenience and brevity, dealing with one

When, as happens sometimes in cases of abortion in the human subject, the embryo is got rid of prior to the critical period, or, at any rate, before the asexual generation has here been suppressed, the latter may go on growing indefinitely if left in the uterus. I refer, of course, to the unrestricted and pernicious growth of the chorion when left in the womb after an abortion." (Transactions of the Botanical Society of Edinburgh, 1902, p. 140–141.)

[5] The carcinomatous character of the pernicious growth of the chorion was first clearly recognised by Professor Marchand in 1895.

[6] Ziegler: Allgemeine Pathologie, vol. i., p. 488, 10. Auflage, 1901.

[7] Also upon researches in mammalian development, especially upon the trophoblast (larva or phorozoon), allantoic placenta, critical period, and span of gestation.

[8] Biologisches Centralblatt, 1902.

[9] Of great but hitherto unrecognised importance in this direction are certain results of experimental embryology, such as those of Driesch, Morgan, and others upon echinoderms and of E. B. Wilson and others upon amphioxus, &c. (For a full account see E. B. Wilson's "The Cell," second edition, 1900, or Korschelt und Heider, "Lehrbuch der vergleichende Entwicklungsgeschichte, Allgemeiner Theil, Jena, Gustav Fischer, 1902.) Space does not permit of a description and discussion of these experiments. The general result is that in certain animals, if the cells of the early cleavage of the egg be separated, each of them will give rise to a diminutive larva, the size of this varying directly with the size of the original blastomere. These minute larvæ are often but erroneously spoken of as "embryos." Though they may go on living for a considerable time no case is known in which an embryo with sexual organs arises upon such a larva, as, of course, would happen in a normal development. Allied to this latter circumstance is the fact that the invertebrate larvæ obtained by embryologists by artificial fecundation never give rise to the sexual form, no matter how long they may be kept living in the laboratory. The writer has reared echinus-larvæ for 15 days without the formation of a sea-urchin upon any one of them. Many other similar facts could be mentioned.

form only, say, the dog-fish (pristiurus), of the 127 primary germ-cells it never happens that all, or anything like all, reach the normal position, the germinal ridge, or nidus. Usually at the most from 90 to 100 of them arrive here, the remainder being found in all sorts of unusual places, where many of them degenerate.

The number of elasmobranch embryos hitherto examined is several hundreds, belonging to different species, and in all these under a certain age no single embryo has been seen in which all the germ-cells present might be described as normally placed. The percentage of vagrant germ-cells varies; it is usually from 10 to 12 per cent. in pristiurus and from 25 to 30 per cent. in raja batis. The places where these occur are numerous, in the body-cavity, upon the somatopleure, on the subintestinal vein, in kidney-tubules, in the pericardium, in the liver, in any part of the gut-epithelium, especially in the rectum, in the skin, rarely in the head or gill-region, and practically always there are some in the immediate neighbourhood of the stomach in connexion with the yelk-stalk. Undoubtedly many of these germ-cells degenerate and few, if any, of the vagrant ones, after a certain early period, ever find their way to the germinal nidus. The embryomas of Wilms are to be regarded as products of such vagrant or of persistent (in ovary or testis) primary germ-cells. But—and this is remarkable—very many such vagrant germ-cells occur in places where embryomas are never encountered; thus in the immediate neighbourhood of the stomach, in the liver, in or under the skin, and in the rectum. In nearly every embryo one or more germ-cells may be found in the yelk-stalk in the immediate neighbourhood of the pylorus and also in the rectal epithelium.

It may therefore be suspected that if the germ-cells of many of these places—e.g., liver, pylorus, rectum, &c.—ever do develop they must give rise to some product not of the nature of an embryo, not an embryoma. It is not without interest that the common situations for the origin of cancer are the very ones in which vagrant germ-cells are usually met with—thus, in the rectum, near the pylorus (yelk-stalk), other parts of the gut, in the kidneys, in the skin, &c. Apparently cancer of the tongue, of the œsophagus, of the larynx, and of the mammary gland at the first glance form exceptions, but this is not really so. Tongue, œsophagus, and larynx are products in the higher forms of a metamorphosis of the gill-region; œsophagus and mammary glands are closely associated with the pericardium, where vagrant germ-cells (and sometimes embryomas as products of these) are often found. That cancer should arise in what embryologically are holes and corners, places where layers and folds come together, as in tongue and larynx, is readily explicable. Such vagrant germ-cells are intruders in the situations originally taken up by them, and it has often been remarked how they would appear to be hustled about from pillar to post when in the way until they land in some corner or other. Normally, if the paradox be allowable, the development of such a vagrant germ-cell should result in a more or less complete twin-embryo, but any gradation of this down to a very rudimentary embryo may be found in practice. Figured in Ziegler's "Pathologie" may be seen all sorts of steps, from complete identical twins, only abnormal in being united at some one point, through those more completely united, to others forming more or less complete embryos embedded within or projecting from a normal one, down to mere cysts or absolutely rudimentary embryos. No one has ever witnessed the development of such a rudimentary embryo or embryoma, and probably it never will be seen, but the connexion between them and vagrant or persistent (in ovary or testis) primary germ-cells is not less certain than that between an onion and the seed originally planted. In the same way the hypothesis that the vagrant primary germ-cells of certain regions, thus those of the neighbourhood of the stomach and of the rectum if they develop, give rise not to an embryo, but to a larva of indefinite unrestricted powers of growth, can never be converted into a fact by direct observation. It can only be inferred from the facts. But it is a very simple explanation of all the facts and its probability is increased by other considerations.

But why should such a vagrant germ-cell, when developing into a cancer, omit or skip the formation of an embryo and proceed with a different portion of the life-cycle? One reason is, perhaps, clear. It is that the further growth of a vagrant germ-cell or of its progeny to form a cancer takes place at a much later period than that at which its embryological development into a more or less complete embryo should have happened. (The instances of cance with embryomas, noted by Wilms, do not form exceptions.) Moreover, it must not be forgotten that we are dealing with pathological conditions, with phenomena, which in some glaring way do not conform with the normal. Cancer is an attribute of later sexual life or of old age. For this reason one is inclined to suppose that it is not immediately due to the further development of a vagrant germ-cell itself, that this latter first of all divides many times, as it would do if in the germinal nidus, and that it ultimately forms more or less normal forerunners of gametes, oöcytes, or spermatocytes. These would be in abnormal situations and under abnormal conditions and under some stimulus they would develop as though parthenogenetically but abnormally to form a larva.

At the basis cancer is nothing more than the production abnormally of a phorozoon or larva within a sexual generation. Elsewhere analogues may be seen. In hermaphroditism we witness the conversion of the forerunners of male eggs (in what are really females) into sperms. In certain ferns abnormally upon the asexual generation or sporophyte what the botanists term "apogamy" is met with—i.e., the appearance of a new sporophyte upon the original one—the formation of a sexual generation or gametophyte and of sexual organs being skipped. It has been urged from a botanical side that comparison between apogamy in certain ferns and carcinoma in a mammal would not be justified, because the former was an abnormal condition. But we are dealing with abnormalities and not with normal occurrences of the life-cycle. If cancer be the abnormal production of a phorozoon or asexual generation by a vagrant germ-cell or its progeny, it may be asked why do not the other items of the life-cycle supervene? Why do not a primitive germ-cell, primary germ-cells, and embryo arise? Were this to happen the cycle, though commencing and being carried out under abnormal conditions, would revert to the normal, and from my experiences of abnormal development in various directions a reversion to the normal is always excluded. Were such an incipient carcinoma to form a primitive germ-cell, before the number of its apical or growing points had been increased, its portion of the cycle would thereby be brought to a close and it is in fact the omission of this which fosters and favours its indefinite unrestricted growth.

The etiology of carcinoma above suggested will be recognised as one whose nature indicates nothing favourable to its prevention or extermination. It may be said to explain completely its peculiarities and its hereditary character. But it is a despairing view. In this respect it is in only too close agreement with the experiences of physicians and surgeons. The one hopeful aspect is that in normal development at a certain period the embryo or sexual form is able in some way or other to suppress the asexual foundation upon which it arose and as a rule the victory of the former over the latter is complete.

As conceived here carcinoma would be a disease peculiar to mammals. For, as recognised by the writer some 10 years ago, in them the phorozoon or asexual generation has become parasitic in adaptation to uterine development. The possibility of carcinomatous development postulates uterine gestation at least for the normal life-span of the asexual generation—i.e., until what was termed the critical period. In fishes, such as the skate or dog-fish, neither a vagrant germ-cell nor its progeny could develop into a carcinoma, for the larval or asexual portion of the life-cycle is not passed as a parasite upon the parent (even in forms with apparent uterine development) but in sea-water; in other words, below the metatherian and eutherian mammals the phorozoon or larva is not adapted for a parasitic existence upon the parent organism and thus cannot become abnormally a parasite upon it. Carcinoma is not known below the mammals, the animal lowest in the scale in which it has been recorded being the short-headed phalanger, belideus breviceps.[10] This disease is a sequel to uterine gestation. If the cycle of metazoan development really be that concluded by the writer, if his interpretation of the phenomena of mammalian development—which are not in the least based upon facts or factors noted in cancer but upon normal development here,—if these be correct the cause of carcinoma is not hypothetical at all but is actually known. More than one cause cannot be assumed and if one cause be shown all other explanations become superfluous. In certain cases in human development, when either no embryo arises within the chorion or

[10] J. Bland-Sutton, Evolution and Disease, London, 1890, p. 247, Fig. 123. The case is one of cancer in the marsupial pouch.

when the embryo becomes aborted or dies prior to the suppression of the phorozoon or larva, the latter, the chorion, may go on growing indefinitely and may give rise to what pathologists and gynæcologists recognise as a form of cancer, placentoma, or chorion-epithelioma (Marchand). For years now I have recognised—and in homologising this structure with the larval skin of an amphibian Hubrecht has gone a long way in the like direction—that the human chorion represents the main portion or whole of the asexual generation or phorozoon here. In certain cases therefore we here witness the conversion of the chorion—i.e., of the asexual generation, or larva, into a malignant tumour, a carcinoma.

What other proof could be asked for? That this proof of the nature of cancer is not in agreement with accepted views of normal development cannot be set down to the fault of the writer. He holds, and has alone long maintained, such views to be false and unfounded in fact, and, moreover, it has been attempted to indicate the right way. The arguments and conclusions have been neither refuted nor confirmed, but have been ignored. But embryologists are living, and have long been existing therein, in a mental universe, where but a tithe of the facts observed are explicable under their views. Under the conception of development as an antithetic alternation of generations, especially as laid down in "Heredity and the Epicycle of the Germ-cells," all the known facts of development fit in, all are capable of easy and natural explanation. And the elucidation of the etiology of carcinoma follows as a natural corollary to the law of the developmental cycle. The embryologist and the pathologist may ignore and neglect the plain and palpable fact, but on no theory of direct development—a thing only existing for the metazoan animals in the human imagination—can any explanation whatever of the nature of carcinoma be advanced. The cause of this would long ago have been clearly recognised had some embryologist taken the trouble, as the writer has done during 14 years past, to trace out in full the details of the life-cycle of one of the higher metazoa from egg to egg. The idea of direct development, accepted within examination of the evidences, and the erroneous belief in the somatic origin of germ-cells have retarded the advance of knowledge to an extent difficult to estimate.

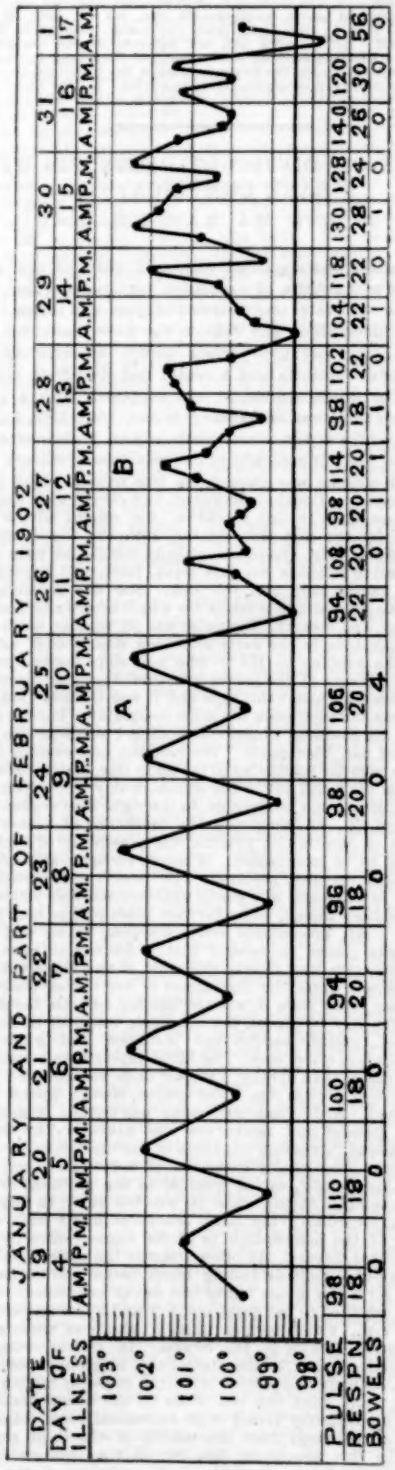
The nature of the argument employed in the present writing may be summarised as follows. Granted the facts of the origin, migrations, and history of the germ-cells of vertebrates, and assuming the course of the life-cycle to be that previously indicated, by hypothesis cancer is derived from vagrant primary germ-cells, which, instead of forming a more or less complete embryo or embryoma, skip this and give rise to a larva or phorozoon of indefinite unrestricted powers of growth. This is, of course, purely hypothetical, but it becomes the true explanation by the following facts. On the one hand, as my researches have shown, the hypothetical "verirrte Keime" or "lost germs" of pathologists not only exist but they are numerously represented and by things capable of abnormal development, the vagrant primary germ-cells. On the other hand, the carcinomatous nature of such an abnormal growth of a larva or phorozoon has been abundantly demonstrated by Marchand for the instances of the pernicious growth of the chorion, chorion-epithelioma. If such a chorion the representative more or less complete of the asexual generation, when robbed of its embryo or when it fails to form such, can—and this is established—give origin to a malignant carcinomatous tumour the nature of cancer is clear. The vagrant primary germ-cell is the seed, while its fruit, sometimes represented by an embryoma, may on occasion take the form of a carcinoma.

List of Memoirs upon the Metazoan Life-Cycle, 1889-1902.—1. The Early Development of Lepidosteus Osseus, Proceedings of the Royal Society of London, 1889. 2. The Transient Ganglion-Cells and their Nerves in Raja Batis, Anatomischer Anzeiger, 1892. 3. On a Supposed Law of Metazoan Development, ibid., 1892. 4. On the Phenomena of Reproduction in Animals and Plants, on Antithetic Alternation of Generations, &c. (with J. A. Murray, B.Sc.), Annals of Botany, 1895, and Anatomischer Anzeiger, 1895. 5. The History of a Transient Nervous Apparatus in certain Ichthyopsida: An Account of the Development and Degeneration of Ganglion-cells and Nerve-fibres, Part I., Raja batis, with eight plates, Zoologische Jahrbücher, vol. viii., 1896. 6. Further Remarks upon the Phenomena of Reproduction in Animals and Plants, Anatomischer Anzeiger, 1896. 7. On Certain Problems of Vertebrate Embryology (The Critical Period, &c.), Jena, Gustav Fisher, 1896. 8. The Yolk-Sac, Yolk, and Merocytes in Scyllium and Lepidosteus, Anatomischer Anzeiger, 1896. 9. On the Disappearance of the Transient Nervous Apparatus in the Series: Scyllium, Acanthias, Mustelus, and Torpedo, ibid., 1896. 10. The Span of Gestation and the Cause of Birth, Jena, Gustav Fischer, 1897. 11. The Birth Period of Trichosurus vulpecula, with one plate, Zoologische Jahrbücher, 1897. 12. The Morphological Continuity of the Germ-cells in Raja batis, Anatomischer Anzeiger, vol. xviii., 1900. 13. The Determination of Sex in Animal Development (abstract), ibid., vol. xx., 1902. 14. The Germ-cells of Pristiurus, ibid., vol. xx., 1902. 15. The Numerical Law of the Germ-cells, ibid., vol. xxi., 1902. 16. The Germ-cells, Part I., Raja batis, with two plates, Zoologische Jahrbücher, 1902. 17. Heredity and the Epicycle of the Germ-cells, Biologisches Centralblatt, 1902, and Transactions of the Botanical Society of Edinburgh, 1902. 18. The Determination of Sex in Animal Development, with figures, Zoologische Jahrbücher, 1902. 19. The Germ-cells, Part II., Pristiurus melanostomus, with plates (almost ready for the press), ibid., 1902.

A CASE OF DIFFICULT DIAGNOSIS WITH A RARE COMPLICATION.

BY H. J. MACKAY, M.D. EDIN.

THE patient was a married woman, 37 years of age, well-developed and healthy, of a sensitive, highly-strung temperament, and with an excessive dread of pain and illness. No previous illness threw any light on the present attack. The family history was unimportant except as revealing the fact that two brothers and a cousin had died from enteric fever. The illness started, it was supposed, with a chill, but of this there was no proof. On Jan. 16th, 1902, having experienced for a day or two previously an ill-defined sense of malaise, she felt generally ill and was drowsy, shivery, and giddy. Headache was present, as was nausea which went on to vomiting. Cough, sore-throat, and coryza were absent. After three days in this condition she sought advice and was seen for the first time on Jan. 19th the fourth day of actual illness. The symptoms already mentioned were then present and in addition she felt weak, faint, and depressed. She had gastric pain and felt sick. She was constipated. The tongue showed a thin white fur which afterwards became thick, grey, and creamy. The pulse was 96, regular, but weak. The temperature in the early afternoon was 99·6° F. and it rose in the evening to 101°. She had slept badly. Some cases of influenza of the gastro-intestinal type had occurred in the household about this time and it was thought that the patient was suffering from the same complaint. For the next five days the course of illness corresponded well with the diagnosis that had been made. The morning and evening temperatures from the fourth day to the tenth day, and a four-hour chart from the tenth day to the sixteenth day, are appended. On Jan. 25th some tenderness in the right iliac region was complained of. It being now the tenth day of illness and the sixth of ascertained pyrexia the possibility of typhoid fever had to be entertained. A search for spots and splenic enlargement revealed nothing. The bowels had acted on this day in response to a gentle aperient and four yellowish stools had been passed, but otherwise constipation had been the rule. All precautions were, however, taken and the patient was placed on enteric diet. An examination for Widal's reaction was clearly desirable at this stage but the patient shrank from the discomfort of the trifling puncture and in her weak state it was not insisted on. On the 27th, the twelfth day of illness, the diagnosis was still in doubt. The onset, neither sudden nor insidious, had given no clear indication either way. The facial expression showed impatience rather than apathy. Hectic flush was absent. The pupils were of normal size. The tongue, though furred, was not parched. Abdominal tenderness was trivial. Constipation was present and meteorism was absent. The heart sounds showed increasing weakness of the heart muscle. The pulse, weak, occasionally irregular, of low tension, but not yet palpably dicrotic, varied from 96 in the morning to 120 in the evening. At this date it was too early to suggest typhoid myocarditis; the heart weakness fitted well with poisoning of the myocardium or of the vagus centre by the toxin of either disease. In other respects the patient on this day expressed herself as feeling much better and begged to be lifted for a few hours out of bed on to her couch. The wish was gratified to her great comfort and apparent benefit. At 7.30 P.M., while resting quietly, she was threatened with a sudden action of the bowels. In endeavouring to accommodate herself to the utensil she, forgetting previous warnings, actively co-operated with the nurse by raising her hips and trunk from the bed while in the dorsal position. She was immediately seized with abdominal pain, followed by pain in both legs from the middle of the thigh downwards. To this succeeded tingling in the legs and feet and soon afterwards numbness and coldness of the extremities. Examination shortly afterwards showed that the



A, Aperient. B, Out on couch from 4 to 7.30 P.M. embolic attack at 7.30 P.M.

lower extremities were cold from the toes to the knees. The feet and the legs were pale. Pulsation was present in both femorals at the groin and in Scarpa's triangle, and the impulse was more forcible and larger than usual. Pulsation was absent in the popliteals, in the posterior tibials, and in the dorsales pedis. Anæsthesia to touch, pain, and temperature was present over the area involved. The legs were wrapped in warm alembroth gamgee, and while the gravity of the outlook was recognised it was hoped the arterial obstruction might not prove to be of a permanent nature. On the following day, however, the condition was unchanged, except for the ominous addition of purple mottling over both legs. Inspection of the trunk on this day—the thirteenth day of the illness—revealed four scattered roseolar papules two to three millimetres in diameter on the back and loins. Splenic enlargement could not be made out. The patient was seen in consultation at this time by Dr. J. Michell Clarke who was of opinion that embolism of the abdominal aorta had occurred and who agreed as to the difficulty of making a decided diagnosis as to the nature of the primary disease but considered the balance of evidence to be in favour of enteric fever. On the two following days—the fourteenth and fifteenth days of the illness—the abdominal symptoms became more pronounced. Peritonitic tenderness developed over the cæcum with some general tympanites. No further spots appeared. Frequent vomiting rendered nutrition difficult. On the 31st—the sixteenth day of the illness—at 4 A.M., a sudden drop of temperature from 101° to 97·6° occurred. Coldness of the hands and failure of the pulse at the wrist ensued. The patient sank and died at 11 A.M. A necropsy was not obtained.

Most authorities recognise the difficulty that may arise in endeavouring to distinguish between gastro-intestinal influenza and enteric fever. Watson,[1] Murchison,[2] Dreschfeld,[3] Goodhart,[4] Leichtenstern,[5] and Curschmann,[6] to name a few only, admit and discuss the difficulty. Goodhart affirms the occasional impossibility of distinguishing between the two diseases until some characteristic development occurs. The bacteriological test is, of course, the crucial one. But there are hypersensitive patients to whom even a needle puncture at the base of the nail is objectionable, and Pfeiffer's bacillus is not easily sought for in cases where no respiratory catarrh is present. In the case described diagnosis appeared possible only after the appearance on the thirteenth day of four roseolar spots. The subsequent lighting up of abdominal symptoms and the fatal drop in temperature on the sixteenth day appear to agree with the diagnosis of typhoid fever but do not confirm it. For apart from the fact that Dr. Michell Clarke is of opinion that these may have been due to thrombosis of the mesenteric artery, with subsequent necrosis of the bowel, there are none of the symptoms mentioned that would not fit equally well with the diagnosis of influenza.

Influenzal typhlitis and perityphlitis have been described by Teissier[7] and Leichtenstern.[8] Peritonitis "grippalis," so called, was a frequent complication in the pandemic of 1890 (Kelsch and Antony[9] and Leichtenstern[10]). Ulceration of the intestinal mucosa with hæmorrhage was noted by Mosler.[11] As regards the roseolar spots, Curschmann,[12] quoted by Leichtenstern, found a roseola present in 1·2 per cent. of the cases of influenza admitted into the Leipsic clinic. Whether this was an initial or a late rash is not stated. The late rashes, however (from the eighth to the fourteenth day), that have been described have been scarlatiniform, urticarial, erythematous, or herpetic. A roseolar, papular exanthem of a few spots only, resembling those of enteric fever and occurring during the second week, has not, so far as I am aware, been described as occurring in influenza.

The deplorable complication recorded above—viz., symmetrical blocking of both femoral arteries, is one of extreme rarity in this country, to judge from the scarcity of references to it in our medical literature other than that of quite recent date. The whole subject of typhoid gangrene, indeed, has

[1] Lectures, vol. ii., Lecture xlix.
[2] Continued Fevers, p. 593.
[3] Allbutt's System, vol. v., article Enteric Fever.
[4] Ibid., article Influenza.
[5] Nothnagel: Specielle Pathologie und Therapie, Band iv., Hälfte 1, article Influenza.
[6] Ibid., Band iii., Theil 1, article Unterleibstyphus.
[7] La Grippe, Paris, 1893.
[8] Loc. cit.
[9] La Grippe dans l'Armée Française, Archives de Médecine Militaire, 1890.
[10] Loc. cit.
[11] Influenza in Greifswald, Deutsche Medicinische Wochenschrift, 1890.
[12] Leichtenstern, loc. cit.

received but scanty notice in the text-books. Murchison had seen a few cases, Flint and Trousseau had not seen a case; Fagge, Reynolds, and Bartholow make no allusion to it; Welch[13] gives numerous references to the subject, but they are almost exclusively to continental and American observers.

Of the rarity of the complication there can be no doubt. Curschmann[14] in a large experience at the Leipsic clinic had seen (1898) two cases, occurring in the legs, both being unilateral, and he states that unilateral plugging is almost invariably the rule. Höltscher, quoted by Welch, does not report a single case in 2000 fatal cases of enteric fever at Munich, while Bettke in 1420 cases found only four, limited to the toes. A full discussion of the subject based on 1700 cases of enteric collected by Keen and Westcott of Philadelphia is to be found in a recent work by the former.[15] In 115 cases of typhoid gangrene which figure in this series 61 were of arterial, as distinct from venous, thrombosis, and of these 12 were bilateral, but not necessarily of the extremities. The legs, however, constitute the site of preference. Of 214 cases of gangrene of all varieties following typhus and typhoid fevers the lower extremities were affected in 126 cases. As regards time of occurrence the gangrene was found to occur most frequently during, or just after, the time of greatest cardiac weakness. Of 41 arterial cases 18 occurred in the second or third week. As regards etiology Keen is disposed to attribute the chief share to imperfect emptying of the cavities of the heart and to a sluggish circulation. In this connexion the case described above possesses interest as being closely illustrative of Dr. Keen's views.

It appears likely from the history of the case that a heart thrombus, probably lævo-ventricular, had formed during the period of observed cardiac asthenia and that by the exertion of raising the body the thrombus, or a portion of it, had been swept into the aorta. Impinging on the bifurcation of the aorta the clot was either broken into two portions of approximately equal size, one of which became impacted in each femoral about its middle third, or, being detained as a riding clot at the bifurcation, it became the nidus of a thrombosis which descended into the femorals and blocked them. To my mind the patency of the femorals at the groin for at least three days after the occurrence appears to favour the former supposition, but Dr. Michell Clarke is of opinion that the latter hypothesis is quite as likely to be the correct one. In a case recorded by Hayem, quoted by Keen, two days after observed alteration in the heart, symptoms of gangrene—viz., pain, with sensation of cold—commenced in the legs. Pulsation then ceased, first in the dorsales pedis, then in the popliteals, and finally in the femorals. Amputation subsequently showed, however, that though no pulsation could be detected the femoral was only partially blocked and a feeble circulation was proceeding. Here, then, even partial obstruction by an incomplete clot was accompanied by absence of pulsation at the groin.

If, finally, it be asked what light the femoral thrombosis throws on the question of diagnosis the answer must be—none.

Arterial thrombosis, according to Welch, though rare, is yet more common in influenza than in any other acute infection, and symmetrical gangrene following plugging has been frequently recorded. In discussing the etiology of these catastrophes Leichtenstern observes[16] that embolism as a cause of thrombosis must be taken into account in cases where aortic arterio-sclerosis or endocarditis is present in the course of influenza, but that even where no gross change can be detected clinically or anatomically the embolism may still occur by means of thrombi dislodged from the left side of the heart.

Devizes.

[13] Allbutt's System, vol. vi., article Thrombosis.
[14] Nothnagel, loc. cit., p. 155.
[15] Complications and Sequels of Typhoid Fever. London: Rebman, 1898.
[16] Loc. cit., p. 154.

CHURCH SANITARY ASSOCIATION.—The Bishop of Stepney, speaking at a recent meeting of the National Health Society, said that the laws of health, no less than the principles of religion, represent the laws of God. The Church Sanitary Association has for 10 years been seeking to raise public opinion throughout the empire to this high level. Local honorary secretaries are wanted in all parts of the empire to help in the extension and deepening of the work of the association. Full information as to methods of working may be obtained at the London office, Church House, Westminster.

LARGE MALIGNANT GROWTH OF THE PYLORUS; POSTERIOR GASTRO-JEJUNOSTOMY; PATIENT IN PERFECT HEALTH 15 MONTHS AFTER OPERATION.

BY MAYO COLLIER, M.S. LOND., F.R.C.S. ENG.,
SENIOR SURGEON TO THE NORTH-WEST LONDON HOSPITAL, ETC.

A MAN, aged 43 years, was sent to me on March 7th, 1901, complaining of great emaciation, loss of strength, and inability to digest or retain anything but the smallest quantity of nourishment. His present illness dated back some two and a half years when he was troubled with vomiting after meals, flatulence, a heavy feeling in the stomach, and much distension. The bowels were always constipated. 18 months before he had been an in-patient at Guy's Hospital. There, he stated, he was dieted and treated with medicines and his stomach was washed out twice daily. Whilst there he improved but on leaving hospital the vomiting returned. At this time he was able to take more food and liquids but the vomiting and discomfort continued and he was palpably getting worse. He lost flesh rapidly, his usual weight being 11 stones 4 pounds. He was now only 8 stones 6 pounds. Whilst in Guy's Hospital he had learned to pass the stomach tube and wash out his own stomach. This he had done ever since three times a day as the only means of obtaining a small measure of comfort. His present condition was evidently one of extreme gravity and urgency. He was so weak that the exertion of walking from the cab to my consulting-room was followed by partial collapse. He was extremely emaciated and cadaverous in appearance and had evidently abandoned all hope of improvement or recovery. His family and personal history were unimportant except for the fact that he was said to have suffered five years before from peritonitis and inflammation of the bowels following what was described as a strain experienced during his arduous work as a blacksmith. Palpation and examination of the abdomen revealed a definite lump or hardness in the right epigastric and hypochondriac region of the size of a small fist. This apparently moved with the liver and was evidently a part of, and attached to, the pylorus. I was not satisfied that I could make out any definite enlargement of the stomach. A consultation was held with Dr. G. Herschell and my opinion was confirmed in every respect except that he was able to make out some considerable enlargement and proptosis of the stomach. We advised immediate operation as the only means of prolonging life.

The patient was admitted into the North-west London Hospital and there, with the aid of my colleague, Mr. J. Jackson Clarke, I performed the posterior gastro-duodenal, or, rather, gastro-jejunal, operation, thus short-circuiting the stomach. The growth was of considerable size, involving the pylorus and the adjacent part of the stomach to the extent of two or three inches. The pylorus with growth was firmly adherent to the liver and gall-bladder and the whole of the structures were matted together by old adhesions. The patient did excellently well and on April 27th he left the hospital much improved in weight, health, and appearance. Five months afterwards he was shown at a meeting of the Metropolitan Counties Branch of the British Medical Association held at the hospital. He weighed 12 stones, looked very fat and well, and expressed himself as quite fit, and said that he had returned to his work as a blacksmith. On May 29th, 1902, just 14 months after leaving the hospital, he reported himself as enjoying the best of health and strength and as quite well. He was doing a full day's work at the forge and was able to eat and to drink most kinds of simple food with ease and comfort. He looked the picture of health, though somewhat thinner than before. The growth could still be felt in the old position, not much, if anything, decreased, but there was no tenderness or pain.

The object of publishing this case is to accentuate the fact, well known to some hospital surgeons and physicians, that the course pursued by malignant growths in the abdominal cavity after operation differs essentially from what one expects to experience in other parts of the body. The

malignant process appears to be arrested for a time. A stasis takes place in the activity of the growth. The barometer indicates a steady rise in the health, strength, weight, and activity of the patient. This patient could not have been in a worse possible condition short of death. His prognosis was apparently hopeless, yet 15 months after operation we find him enjoying the best of health, performing a full day's work of the most arduous character, and apparently as well as ever he was in his life. Operative interference in these cases does one of two things, both in themselves desirable—it shortens the misery by death or it prolongs the life by recovery.

Harley-street, W.

EOSINOPHILIA ASSOCIATED WITH HYDATID DISEASE.

BY C. G. SELIGMANN, M.B., M.R.C.P. LOND.,
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AND
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ASSISTANT IN THE ELECTRICAL DEPARTMENT, ST. THOMAS'S HOSPITAL.

WE are indebted to Dr. Hector W. G. Mackenzie for permission to publish the following brief notes of a case under his care.

The patient, a well-nourished young woman from the east coast of England, aged 22 years, is one of a family of five children, all of whom, except herself, are stated to be healthy. There is a history of pulmonary tuberculosis on both sides of her family but she herself has always enjoyed good health until two years ago. Before that time she was in the habit of fondling a pet dog which constantly licked her hands. In December, 1900, and again in January, 1901, she suffered from attacks of pain in the right side which were considered to be due to pleurisy. Early in November, 1901, she suffered from abdominal pain which was not severe enough to prevent her following her usual occupation of nursery-maid. On Dec. 20th, 1901, she had malaise and pain in the region of the right shoulder which was so severe that she could not do her work.

On admission into St. Thomas's Hospital on Dec. 24th, 1901, her temperature was 101·2° F. By the evening of the 28th it had fallen to normal and remained so till Jan. 10th. There were enlargement of the right lobe of the liver and friction in the right axilla which suggested to Dr. Mackenzie the possible presence of hydatid disease. The patient's blood was examined on Dec. 27th at 11 A.M., about two hours after her last meal and gave the following results: Red cells, 6,290,625 per cubic millimetre; hæmoglobin, 70 per cent.; colour index, about 0·6; and white cells, 17,000 per cubic millimetre. A differential count of 500 white cells was as follows: polymorphonuclear neutrophiles, 22 per cent.; eosinophiles, 57 per cent.; lymphocytes, 20 per cent.; and basophiles, 1 per cent.

An operation was performed on Jan. 10th when 10 ounces of clear fluid, which contained hydatid hooklets, were withdrawn from a cyst in the right lobe of the liver. The next day her temperature rose to 102·5° at midnight and continued to rise to this height nightly with morning remissions until the 18th. A second examination of the blood was made on the 13th. It showed 7000 leucocytes per cubic millimetre. A differential count showed: polymorphonuclear neutrophiles, 58·8 per cent.; eosinophiles, 12 per cent.; lymphocytes, 28·2 per cent.; and basophiles, 1 per cent. On the 16th it was noticed that the discharge from the cyst was copious and offensive and two days later it was purulent. At this time the temperature became normal for a couple of days; it then rose, and though fluctuating considerably for the next month, it was, on the whole, constantly high at night. Further hydatid cysts were evacuated through an incision in the right fifth intercostal space. A differential blood count was made on Feb. 20th, with the following results: polymorphonuclear neutrophiles, 60 per cent.; eosinophiles, 1 per cent.; lymphocytes, 29·4 per cent.; and basophiles, 0·6 per cent. At this time there was a considerable amount of purulent material draining from both wounds and a few collapsed cysts were also discharged. A blood count taken on March 13th, when the morning temperature was 102°, showed: red cells, 2,934,375, and white cells, 7600 per cubic millimetre. A differential count showed: polymorphonuclear neutrophiles, 73·2 per cent.; eosinophiles, 3·2 per cent.; lymphocytes, 22·2 per cent.; and basophiles, 1·4 per cent. On the 21st a further cyst was evacuated and a large quantity of clear fluid was withdrawn. On April 3rd the fifth examination of the blood was made when a differential count (200) gave: polymorphonuclear neutrophiles, 64·5 per cent.; eosinophiles, 1 per cent.; lymphocytes, 34·5 per cent.; and basophiles, *nil*. No urticarial rash was present at any stage of the patient's illness.

The chief interest of the case centres in the high percentage of eosinophiles present. The number found in the first count is in excess of any records which we have been able to find, with the exception of a case of trichinosis under the care of W. Osler,[1] in which the blood was examined by T. R. Brown and the eosinophiles were found to number 68 per cent. in a total leucocytosis of 1700, and a case of ankylostomiasis examined by Bücklers,[2] in which the eosinophiles numbered 72 per cent. It is most nearly approached by certain other cases of trichinosis and in bronchial asthma at the time of the paroxysms. In the latter complaint Billings[3] reports counts of 53·6 per cent., 38·2 per cent., and 33·9 per cent. eosinophiles in three cases in which the total leucocyte count was not increased. As is well known eosinophilia—for the most part of slight degree—occurs in a number of diseases, especially, according to Neusser, in pemphigus, in most non-malignant diseases of the liver, and "in trouble involving the female genitals, especially the ovaries."[4] Further, Neusser considers "that the increase of eosinophiles which he finds in hydatids serves to distinguish them from hydronephrosis, dilated gall-bladder, &c."[5] Recently Lovell Gulland[6] has shown that marked eosinophilia occurs in filariasis and his results have been confirmed by Coles[7] who, further, in a case of bilharzia disease occurring in an otherwise healthy and athletic Englishman, found that 20 per cent. of the leucocytes present were eosinophiles. None of the causes enumerated above were present in the case which we describe, with the possible exception of ovarian trouble, which might perhaps be considered to have been present since the patient had not menstruated for a few months preceding admission to St. Thomas's Hospital. We do not, however, think that this last-mentioned factor, even considering it to have existed, could have caused the enormous increase of eosinophiles found, and it seems alike simpler and more rational to regard hydatid disease as the cause of the blood change, more especially as the number of eosinophiles present gradually dropped to normal after operation. Again, it is interesting to note that, according to Bückler, "all kinds of helminthides, from the harmless oxyuris to the pernicious ankylostoma, may bring about an increase of the eosinophile cells in the blood, often to an enormous extent." The author makes no mention of hydatid disease.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF RABIES LATENT FOR 20 MONTHS.

BY HOWELL REES, L.R.C.P. LOND., M.R.C.S. ENG.,
AND
D. C. ROWLANDS, L.R.C.P., L.R.C.S. EDIN.

ON August 9th, 1900, a powerful, mountain-bred man, 63 years of age, was bitten on the metacarpo-phalangeal joints of the thumb and forefinger of the left hand by a fox terrier which hung on to his hand. In his attempts to free himself the wounds were considerably lacerated and were cauterised

[1] Osler: Principles and Practice of Medicine, p. 357 (London, 1901); and Cabot: Clinical Examination of the Blood, p. 229 (London and New York, 1900).
[2] Quoted by Ehrlich and Loranus: Histology of the Blood, 1900.
[3] New York Medical Journal, May 22nd, 1897.
[4] Cabot: loc. cit., p. 117.
[5] Ibid., p. 229.
[6] The Condition of the Blood in Filariasis, Brit. Med. Jour., April 5th, 1902.
[7] The Blood in Cases affected with Filariasis and Bilharzia Hæmatobia, Brit. Med. Jour., May 10th, 1902.

with nitrate of silver by one of us on the patient's arrival at the surgery. A little boy was also bitten on the leg by the same dog on the same day. The dog was shot and buried the same evening. An attempt was made to get the Board of Agriculture to exhume the carcass and to examine the head, and after a great deal of circumlocution and in reply to an urgent request to relieve the suspense of those bitten, the secretary wrote that decomposition would be now too advanced to allow of inoculation experiments being of any value. It was then determined to give the patients the benefit of the doubt as to whether the dog was suffering from rabies or not and to send them to Paris for treatment at the Pasteur Institute. But further delay was caused by the necessity of collecting subscriptions to defray the expenses and of writing to Paris to arrange for accommodation for the patients at a hotel, so that it was August 29th when they started on the journey. The man was under treatment at the institute for 19 days, and he returned home feeling as well as ever, and remained so until May 26th, 1902, when he complained to some of his friends of pain in his left arm, and on the morning of the 27th he visited one of us at his surgery complaining of pain in the left arm and in the stomach and of sickness. On trying to swallow the medicine given to him he found that he could not do so owing to the painful spasms caused by the attempt. On the evening of the same day he walked one and a quarter miles with a friend and a brother to see one of us, and he was then (6 P.M.) in a state of semi-collapse, with a cold clammy skin, a small rapid pulse of over 120, an expression of terror on his face, and frequent spasms of the muscles of deglutition and respiration, accompanied by deep sighs and groans and startings to his feet and gasping for breath, with the shoulders raised and the chest expanded. He was ordered to return home and to go to bed immediately, the brother being privately informed that he was suffering from rabies. We attended him and gave him a hypodermic injection of a quarter of a grain of morphine and atropine which was repeated twice up to 3 A.M. the following morning (the 28th), when the patient was raving mad, requiring five men to hold him down, and we suggested that chloroform might be administered. On returning with some chloroform we found that he was now under the influence of the narcotic and in a state of semi-consciousness; he recognised us with a faint smile but immediately relapsed into the terrorised expression of face, with the spasms still continuing though with lessened severity. An enema of gruel and one drachm of chloral hydrate were now given and later, as the spasms and restlessness continued, a hypodermic injection of hyoscine was given, but in the course of two hours or so another quarter of a grain of morphine had to be given. His temperature at 4 A.M. was 102° F. and his pulse-rate was 132. There were intense thirst and total inability to swallow anything to quench it, the sight of any fluid causing spasms; there were also great intolerance of light (photophobia) and hyperæsthesia. There was a wild expression of the eyes with protrusion of the eyeballs which were very bloodshot. While lying in bed he would suddenly spring up on his feet and then lie down again, wrapping the bedclothes around him. The saliva was not swallowed, as it ran out at the corners of his mouth. The slightest draught of air also disturbed him. His daughter-in-law attempted to wash his feet but as soon as the water touched him he started violently and she had to desist. He continued in very much the same condition throughout the day and and was seen to be getting weaker every hour, but he never lost complete consciousness and died without any convulsions at 8.30 P.M. No post-mortem examination was made.

Notwithstanding the blundering policy of the Board of Agriculture in delaying the examination of the carcass of the dog until too late, there could be no reasonable doubt that the dog was rabid. It was ascertained that it had bitten several people near its home, and a cow also bitten by it had died and also, it is said, several cats in the establishment of its owner had also died after being bitten. Whether the result would have been different if the man could have been sent to Paris immediately after being bitten it is impossible to say.

It has been to us a cause of wonder for some time why an institute similar to the Pasteur Institute in Paris should not have been established in London long ago. It was no light matter for these poor people from the Amman Valley, Carmarthenshire, knowing no language but their native Welsh and never having been outside their own country before, to undergo the long and tedious journey to Paris and back. Had there been a Pasteur institute in London patients from any part of the British Isles could be under treatment within 24 hours, at a trifling expense, and be independent of the red-tapeism of the Board of Agriculture. New York, St. Louis, and Kasauli, India, have their Pasteur institutes, and why not the greatest city of them all—London?

Glan-Garnant, South Wales.

CASES OF MULTIPLE EXOSTOSES.

BY A. E. FRANCIS, M.R.C.S. ENG., L.R.C.P. LOND.,
HOUSE SURGEON, ROYAL PORTSMOUTH HOSPITAL.

A BOY, aged six years, suffering from a sprained wrist, was brought by his father to the casualty department of the Royal Portsmouth Hospital. Upon examination a tumour was detected at the lower end of the right radius, near the junction of the epiphysis with the diaphysis. This was found upon manipulation to be a hard and painless pedunculated growth apparently springing directly from the bone. At the inner side of the upper end of the right humerus there was another tumour projecting visibly beneath the skin. It was about one and a half inches in length, smooth and slender, but expanded and tuberculated at its extremity. A still further examination of the child revealed similar outgrowths in the following situations: the acromial end of the right clavicle, the sternal end of the sixth rib on the right side, the lower ends of the right and left femora, and the upper ends of the right and left tibiæ. That on the rib was flattish and more sessile but the others were distinctly pedunculated. Those upon the femora took origin just above the internal condyle and projected upwards, whilst those upon the tibiæ arose from the internal tuberosity and projected downwards. The child was healthy and well nourished and showed no signs of rickets. The father was similarly affected and tumours were found at the upper end of the right humerus, the sternal end of the eighth rib on the right side, the lower ends of the right and left femora, the upper ends of the right and left tibiæ, and the lower end of the right tibia. He volunteered the information that the "lumps" had increased in size when he was a child but that when he became a man they had ceased to grow. They never caused him any inconvenience. He also said that his father had them too. His wife was quite healthy. They had no other child.

There is no doubt that these tumours were exostoses of the cancellous or spongy type. I think that the cases are of interest from the very well-marked hereditary history, the multiplicity of the tumours, and the degree of symmetry that existed between the outgrowths of opposite sides.

Portsmouth.

A RAPID AND SIMPLE METHOD OF LOCALISING FOREIGN BODIES BY THE X RAYS.

BY J. WISHART LITTLE, M.B., L.R.C.P. LOND.,
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THE method of localising foreign bodies described by Mr. W. R. FOX in THE LANCET of Sept. 21st, 1901, p. 764, is doubtlessly mathematically correct, but it is too tedious and complicated to be of great practical use when expediency is an important factor. The following may be worthy of note to those interested in x-ray work, but it is certainly of importance in military surgery, especially in active service, where time and means of transport are both limited.

The patient is placed on a couch or a table fitted with the usual drum and cross-wires in such a position as to allow the foreign body, the presence of which has previously been determined by means of the screen, to be as nearly as possible over the meeting point of the wires. The vacuum-tube is fixed at a height of 15 or 20 inches, according to the thickness of the part to be radiographed, measuring from the plate to the anode and as nearly as possible vertically over the crossing point of the wires. This position of the tube is known as the zero point. Two photographs are now taken on one negative, the first exposure being given from a point two inches to one side of the zero. The

tube is then moved through a distance of four inches to a point two inches on the other side of the zero, in a horizontal direction, from which the second exposure is given. On developing the plate the cross wires and two shadows of the foreign body are seen. By means of a sliding caliper scale, which I have had specially engraved for the heights of 15 and 20 inches, the actual depth of the foreign body from the plate may immediately be read off from the instrument, after placing the fixed jaw of the scale on one part of the first shadow and sliding the moveable jaw along till it points to the corresponding part of the second shadow.[1] It is often, however, found advisable in cases where the foreign body is less than one inch from the surface to increase the distance through which the x-ray tube is moved to eight inches instead of four inches (i.e., four inches on each side of the zero). By this means the distance between the shadows is increased and consequently a more accurate result obtained but with some distortion of the images. Of course, it must be remembered that by doubling the distance through which the tube is moved the reading on the scale must be halved to give the true depth of the foreign body from the plate.

In rapid work, when great accuracy is not required or when photographic plates cannot be obtained, the screen, fitted with cross wires and a thin sheet of transparent celluloid on which the shadows may be marked, is employed in exactly a similar manner. In using the screen, however, it is advisable to work with a distance of only 10 inches (measuring from screen to anode) instead of 20 inches. The reading on the 20-inch scale must necessarily be halved to obtain the true depth of the foreign body from the screen. It must, nevertheless, be admitted that localisation by this means is not as satisfactory as when negatives are employed since the shadows are generally lacking in definition. It is obvious that this direct-reading localising scale, which only measures eight inches in length, has a great advantage over the other and more cumbersome localisers in use.

The above method is founded on the principle described by Mr. J. Mackenzie Davidson but it is more compact and simple.

Blackheath.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

AN UNUSUAL CASE OF INTUSSUSCEPTION; OPERATION; RECOVERY.

(Under the care of Mr. H. S. PENDLEBURY.)

WE have published in the "Mirror of Hospital Practice" numerous cases of intussusception in which early operation was successful in saving life. The following case is a valuable addition to the series, for it demonstrates clearly the utter unlikelihood of a reduction of the invagination by any method of injection or inflation. The indurated iliac intussusception which was last reduced could be amenable only to direct surgical treatment. The practice of employing inflation or injection for the reduction of an intussusception is yearly less frequently seen and the value of an early laparotomy is more and more recognised. The best results will be obtained when the public have learnt the importance of the early symptoms of the disease and the danger of purgatives. For the notes of the case we are indebted to Mr. Adrian Caddy, house surgeon.

A boy, aged two years, was admitted into St. George's Hospital on Dec. 29th, 1901. The child had had a large meal of nuts on the 26th; in the afternoon of the 28th he was seized with sudden acute abdominal pain, followed by vomiting, and in a few hours' time by the discharge of much mucus and some blood from the rectum. The vomiting and rectal discharge continued and Dr. G. E. Hale was called in. He diagnosed intussusception and advised immediate removal of the child to St. George's Hospital.

On admission the patient was a bright, healthy-looking child who sat up in bed and did not seem to be much distressed. His pulse was 144 and his temperature was 99·6° F. On examination of the abdomen, movement of the parietes was free; there was little distension and on palpation no rigidity of the abdominal muscles or marked tenderness was noted, but a rounded, sausage-shaped tumour, dull on percussion, was detected extending from the right iliac fossa to the region of the umbilicus and freely moveable. Rectal examination elicited nothing except some mucous discharge. The child vomited some brownish-coloured fluid on two occasions after admission. Mr. Pendlebury was sent for and he decided on immediate operation 26 hours after the onset of acute symptoms. Ether on a cone was the anæsthetic chosen, and the abdomen was opened through a two-inch incision below the umbilicus in the right rectus muscle. The tumour was at once seen and was lifted out of the abdomen; it was about six inches in length. It showed only a slight degree of congestion and was reduced with little difficulty. After reducing the intussusception which was of the commoner ileo-cæcal variety, there was exhibited about two inches from the cæcum a second intussusception of the ileum from one to two inches long; this also was easily reduced. At this spot the infiltration and thickening of the intestinal wall were greatest. The abdomen was closed with fish-gut sutures which were removed 10 days later when the wound was quite healed. The operation lasted 20 minutes. The bowels acted naturally on the third day and abdominally nothing abnormal afterwards occurred.

The patient had been suffering from a slight cough for a few days before admission and, possibly as a result of the ether anæsthesia, he developed a severe attack of bronchitis with a troublesome cough which did not subside for 10 days. The temperature during this time fell gradually from 102° to normal and thus for some while his condition occasioned considerable anxiety. He was discharged 24 days after the operation and was seen again on Feb. 20th, when the scar seemed to be quite firm.

Remarks by Mr. CADDY.—The case is interesting on account of the very unusual type of intussusception and the slight injury which the peritoneum had received, and the length of time which had elapsed between the onset of symptoms and the operation (26 hours). The absence of collapse or of abdominal pain was marked and one would expect in an intussusception of this nature more acute symptoms.

Remarks by Mr. PENDLEBURY.—The chief point of interest in this case lies really in the actual anatomy of the intussusception. Clinically it might be described as a "typical case," for it presented all the usual phenomena expected in acute intussusception, from the history of the previous indigestible meal of nuts to the existence of a definite tumour. Perhaps, however, one might mention that the child looked remarkably fit and well considering his condition. This case, I think, comes under the variety denominated iliaco-ileo-colica by Leichtenstern.[1] I should say that the small intussusception of the ileum occurred first and acting possibly as an irritant tumour caused the further and far more usual ileo-cæcal form. Certainly, after reduction, which was easily accomplished, the stiffest and most infiltrated and inflamed part of the gut was the few inches occupied by the enteric intussusception. The case admirably illustrates the advantages of early diagnosis and immediate surgical treatment.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL.

A CASE OF AMPUTATION OF THE RIGHT SHOULDER AND THE RIGHT HIP.

(Under the care of Dr. P. A. PEARCEY.)

SIMULTANEOUS or rapidly consecutive amputations of two limbs are always noteworthy when the limbs are removed at a high level. Most commonly the lower limbs are the seat of double amputation, for it is more likely that both legs will be irreparably damaged than that both arms or one leg and one arm will be thus affected. In the following case

[1] The instrument may be obtained from L. Miller, manufacturing electrician, 93, Hatton-garden, London, E.C.

[1] Treves: Intestinal Obstruction, p. 145.

the arm was amputated at the shoulder-joint and the thigh at the hip-joint, and it is probable that in this respect the case is without parallel. Several cases are on record where portions of three limbs have been amputated[1] but much less of each limb was removed than in the case recorded below. For gangrene portions of all four limbs have been amputated.[2] For the notes of the case we are indebted to Mr. Allan Walker, late house surgeon.

A girl, aged 17 years, was admitted to the Monkwearmouth and Southwick Hospital on Nov. 18th, 1901, suffering from the result of an accident caused by her dress having become caught in between two small cog-wheels whilst she was oiling some machinery. On admission she was suffering from great shock but was conscious. Her right arm and right thigh were severely smashed and mutilated and though both brachial and femoral arteries were torn no tourniquet had been applied and there was little or no hæmorrhage—in fact, the limbs were merely hanging by small skin attachments. On seeing the patient, an hour after the accident, as she had been brought over two miles in a cart to the hospital, Dr. Pearcey at once decided to amputate both limbs. Amputation at the shoulder-joint was first performed. Owing to the mutilation some difficulty was experienced in obtaining flaps but a little manipulation overcame this. This having been accomplished Dr. Pearcey proceeded to amputate the right leg at the hip-joint, when the same difficulty of obtaining adequate flaps was present. Before commencing each amputation Dr. Pearcey ligatured the axillary and femoral arteries respectively. Chloroform was at first administered as an anæsthetic but this was soon changed to ether, only sufficient being given to keep the patient unconscious. Immediately on admission she was given one-thirtieth of a grain of strychnine and half a drachm of ether hypodermically. During the operation signs of heart failure commenced and a further hypodermic injection of one-tenth of a grain of strychnine was given. After the amputation at the shoulder was completed these symptoms reappeared and she was infused with three pints of saline solution, one drachm to the pint, at a temperature of 100° F. This was done whilst the amputation at the hip-joint was proceeding. The operation lasted one and a half hours. The accident had occurred at brickworks and the parts required extensive cleansing. The girl had been swung round and round with the wheel and each time the limbs came in contact with the ground the tissues became embedded with clay and earth, so that it was impossible to obtain clean flaps free from earthy matter. Primary union was consequently not expected; in fact, the girl's condition appeared perfectly hopeless. Despite this the shoulder did practically heal by first intention. The hip gave more trouble; it suppurated but slowly healed. The after-treatment was simply that required by such a case—free drainage, stimulants, and generous diet.

Remarks by Dr. PEARCEY.—The main points of interest in this case are the following: (1) that the girl escaped hæmorrhage; (2) that she survived the operation; and (3) the unique nature of the condition, both arm and leg being amputated at the shoulder- and hip-joints respectively on the same side of the body. I should be glad to know how many similar cases have been recorded with the same happy result.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Changes in the Bone Marrow associated with Suppuration within the Knee-joint.—Neuro-lipomata of the Median Nerve.—"Chyle" Cyst of the Mesentery.—Dermoid Cyst of the Inguinal Canal.—Meningococcus in a Case of Cerebral Tumour.—Tuberculosis in a Python.—Exhibition of Specimens.

A MEETING of this society was held on June 17th, Mr. W. WATSON CHEYNE, C.B., the President, being in the chair.

Dr. A. G. PHEAR read a paper on the State of the Bone Marrow of the Femur in a case of Suppuration of the Knee-joint, followed by Profuse Secondary Hæmorrhage. The changes in the medullary tissue were of a double order; there was (1) proliferation of myelocytes and allied cells similar to that which had been recorded in other cases of infective processes and constituting the so-called "myelocytic reaction" to infection; and (2) proliferation of cells of the erythroblastic type, of special interest when viewed in connexion with the severe hæmorrhage that took place some days before death; the characters of the erythroblasts were such as to denote an early stage in their growth. Giant cells were present in considerable number. The proliferation of the cellular constituents of the marrow had advanced to such a degree as to transform its general character; in the place of a tissue consisting almost wholly of fat there was found an opaque, firm, reddish tissue containing an insignificant amount of fat and composed chiefly of the various cells described. Reference was made to recent investigations into the marrow changes attendant on experimentally induced infection with pyogenic organisms and stress was laid on the close similarity between the results of experiment and the marrow lesions which in the present case were found to be clinically associated with suppuration. The importance of such observations, both clinical and experimental, lay in their bearing on the view that the bone-marrow was the source of the polymorphonuclear blood corpuscles, and therefore the chief tissue concerned in the leucocytosis that accompanied infective diseases.—Dr. H. BATTY SHAW remarked on the absence of karyokinesis in the cells of bone marrow as observed by Dr. Phear. How was this to be brought into line with the view that bone marrow was the place of origin of the leucocytes?—Dr. PHEAR, in reply, said that no blood examination was made because the case did not come under his notice until after death. In regard to the absence of nuclear changes in the cells other observers had found karyokinetic figures and their absence in this case did not negative the origin of leucocytes from bone marrow.

Mr. H. J. WARING narrated a case of Neuro-lipomata of the Median Nerve occurring in a man aged 38 years. The patient had been quite well until June, 1895, when the right hand and forearm had been crushed by a heavy bar of wood. One year later he suffered pain in the hand and arm which continued until October, 1900, when he was first seen, and resulted in a considerable enlargement of the thumb and forefinger. Amputation was performed in April, 1901, and a diffuse lipomatous growth was found to have formed along the peripheral branches of the median nerve which was also found to be thickened in the forearm. The amputated hand and a skiagram of it were exhibited.—Dr. H. MORLEY FLETCHER suggested the possibility of the case having some relation to von Recklinghausen's disease and asked if there were any tumours along the nerves or pigmentation of the skin in other parts of the body. Was it not a fact that the lipomatous growth had recurred in the limb since the amputation?—Mr. WARING, in reply, said that there were no tumours in any other part of the body.

Dr. JOHN FAWCETT exhibited a "Chyle" Cyst of the Mesentery, which had produced intestinal obstruction in a child, aged three months, who was admitted into Guy's Hospital on Dec. 13th, 1902, and died the next day. He had been well till Dec. 11th, when diarrhœa and vomiting commenced and continued. At the necropsy an acute intestinal obstruction was found, due to a cyst which had caused a kinking of the small intestine. The cyst was a unilocular one, of the shape of a pear, and it was distended with a milky fluid. The glands in the mesentery were enlarged. The analysis of the fluid by Mr. J. H. Riffel showed it to be chyle. It contained coagulable proteids and 7·7 grammes per 100 cubic centimetres of fat. The reaction was alkaline. Sections made from two pieces of the cyst wall showed it to be composed of fibrous and muscular tissue. The characters of this cyst, both as regard its position, contents, and structure, were similar in many ways to those described by Eve,[1] Moynihan,[2] and others. The classification previously adopted, based largely upon the contents of these cysts, was not thought satisfactory. The nature of the contents was more or less a matter of chance. The most satisfactory plan would be to classify them all as of embryonic origin (as suggested by C. Dowd in the Annals of Surgery, vol. xxxii., 1900), arising by sequestration from the intestine or its neighbourhood, some from mesoblastic tissue having fibrous or muscular walls or both, others from hypoblast tissue as well, and therefore showing epithelial structures.

Mr. HERBERT PATERSON showed a Cyst removed from the

[1] THE LANCET, April 13th, 1889, p. 730, and Ashurst: Medical and Surgical Reporter, 1888, vol. i.
[2] Brit. Med. Jour., 1888, vol. i., p. 81.

[1] Transactions of the Royal Medical and Chirurgical Society, vol. lxxxi., p. 51.
[2] Annals of Surgery, vol. xxvi., p. 1.

Inguinal Canal of a man, aged 35 years. A swelling thought to be hernial had been noticed for five years. Shortly before its removal the swelling had suddenly become painful and an attempt had been made under an anæsthetic to reduce it. On opening what was thought to be a hernial sac thick pultaceous material escaped. Further examination showed the swelling to be a closed sac, not communicating with the abdominal cavity. On dissecting it out it was found very adherent to the surrounding structures. At its inner part it was attached to the front of the symphysis pubis by a fibrous band. One hair was detected growing on the wall of the cyst. Microscopical examination showed the cyst to be lined with skin. Mr. Paterson commented on the rarity of dermoids in this region and referred to a similar case recorded by Mr. A. Pearce Gould in THE LANCET of Nov. 4th, 1893, p. 1126. He had been unable, however, to find any case in which the supposed nature of the cyst had been verified by microscopical examination.

Dr. CLIVE RIVIERE read a paper on the Meningococcus in a case of Cerebral Tumour Simulating Posterior Basic Meningitis. The case occurred at the Shadwell Children's Hospital. A male child, aged nine months, suffered with head retraction and progressive hydrocephalus with a spastic condition of the limbs and died after an illness of four and a half months. A diagnosis of posterior basic meningitis had been made, but at the post-mortem examination no meningitis was found, only a large caseous tumour in each corpus striatum, that in the left being the larger and extending back into the pons, obstructing the Sylvian aqueduct and giving rise to extreme hydrocephalus. In this pent-up fluid was found a diplococcus (isolated on three occasions; twice from fluid obtained during life and again at the post-mortem examination), the morphological and cultural characteristics of which pointed to its being a variety of the meningococcus. The discovery of this organism during life had seemed to confirm the diagnosis of posterior basic meningitis. Dr. Riviere pointed out that though the meningococcus had been isolated from cases of tuberculous meningitis he had not been able to find a case in which it had been found under the conditions described above.

Mr. S. G. SHATTOCK recorded an instance of Tuberculosis in a Python, and a portion of the creature's gullet was exhibited. The lesions of unusual character were those of the œsophagus, in the mucosa of which there were a series of oval swellings, each consisting of a compact aggregate of small spherical tubercles. No such lesion was met with in the human subject, in whom tuberculous disease of the œsophagus was known only as a result of direct extension from neighbouring structures. The peculiar lesions in question were explained by the fact that in ophidia there occurred normally in the mucosa of the œsophagus oval lymphatic nodules or "glands" like those of the intestine; they lay immediately beneath the epithelium which was of the columnar-celled variety. Mr. Shattock viewed the infection as direct and due to the consumption of tuberculous food, the main lesion being in the stomach. The food consisted of ducks and the bacillus was probably avian in source. Acid-fast bacilli were demonstrable in the œsophageal lesions. Mr. Shattock observed that there was no trace of ulceration over these lesions, the infection having occurred between the cells of an intact epithelium. It was not so much that the bacillus had selected the site as that the sites had selected the bacillus. The process was a transport of bacilli by wandering cells like that of inhaled inorganic particles to the bronchial glands. As regarded the temperature it had long been known that the tubercle bacillus would grow at comparatively low temperatures, and as the python in question had lived in an atmosphere of 70° F., the temperature of the water in its tank being as high even as 80° F., the growth of the bacilli offered no difficulty though occurring in a "cold-blooded" creature.

Mr. WARING exhibited: (1) A Congenital Lipoma of the Face and (2) a Congenital Tumour of the Superior Maxilla.

OBSTETRICAL SOCIETY OF LONDON.

Pregnancy after Removal of Both Ovaries for Cystic Tumours.—Primary Ovarian Gestation.—Exhibition of Specimens.

A MEETING of this society was held on June 4th, Dr. PETER HORROCKS, the President, being in the chair.

Mr. ALBAN H. G. DORAN read a paper on Pregnancy after Removal of both Ovaries for Cystic Tumour. A woman, aged 25 years, after bearing one child, underwent ovariotomy for a multilocular adenomatous cystic tumour of the left ovary. She then bore four more children and afterwards, when 39 years of age, came under Mr. Doran's care and he removed a similar tumour of the right ovary. The base required enucleation, part of the capsule was ligatured like a pedicle with silk, and the greater portion was cut away, but in that part no trace of the Fallopian tube could be detected. A small tubercle on the left of the uterus was the sole remnant of the left appendages. After convalescence the period recurred and continued till the patient became pregnant and bore a child at term two years after the operation. The period then returned and ceased abruptly when the patient was 45 years of age. The consequent menopause symptoms were distinct though mild. Mr. Doran briefly reviewed a few cases, already reported, where pregnancy ensued after the removal of both ovaries for tumour or chronic inflammatory disease. In a case recorded by Schatz, in which both ovaries were removed for cystic tumour, one tube and a piece of ovarian tissue were purposely left behind. Five years later the patient gave birth to a child at term. Stansbury Sutton of Pittsburgh reported a case in which both ovaries were removed for cystic disease; the right pedicle was severed by cautery, the left by scissors. The patient was twice pregnant afterwards. Dr. Gordon of Portland, Maine, U.S., removed both tubes and ovaries for inflammatory disease and the patient was delivered of a child two years later. Other reported cases were doubtful. The presence of ovarian tissue was essential in these cases. In Mr. Doran's case it was probably a detached area lying in the right ovarian ligament; the cyst itself was certainly enucleated entire. Mr. Doran suspected that the Fallopian tube escaped ligature and removal altogether, the base of the tumour being enucleated from the posterior layer of the broad ligament. The condition after operation would then be as in Schatz's case, the tube remaining entire. It was not absolutely certain, however, that the tube was not included in the ligature and in the part removed. This occurred in the cases of Stansbury Sutton and Gordon and reference was made to a case where pregnancy occurred after Cæsarean section and ligature of both tubes with silkworm gut for "sterilisation" (Galabin-Horrocks). The ligature might either loosen or perhaps ulcerate through the tube, which managed to heal behind it without stricture of its canal. The tube might then resume its functions, even if reduced to a stump.—Mr. J. BLAND-SUTTON observed that Mr. Doran's interesting communication really raised two important questions for consideration—namely, the occurrence of pregnancy after double ovariotomy and the effect of a ligature on the continuity of the lumen of a Fallopian tube. Probably no one in England had studied so closely the "fate of the ligature" after successful ovariotomy as had Mr. Doran, and he certainly was the first to study the changes which took place in the stump of the pedicle after intra-peritoneal ligature. It was now quite certain that when a Fallopian tube was ligatured in continuity it did not necessarily permanently obliterate the tubal lumen. In his Cæsarean section for pelvic contraction Mr. Bland-Sutton in 1891 tied the Fallopian tubes with thin silk within an inch of the uterus; this patient had remained sterile. On a subsequent occasion, where it was deemed prudent to induce labour for uncontrollable vomiting and epileptic seizures, an attempt was made to sterilise the patient by drawing out each tube and transfixing the mesosalpinx with a needle armed with thin silk and then tightly tying the tube near its middle. This failed, for the patient quickly conceived again and had reconceived many times, though her constitutional condition had never allowed a pregnancy to go to term. Since this experience Mr. Bland-Sutton had always tied the tubes in two places and exsected a piece of the tube when it was desirable to sterilise a patient. Mr. Doran's suggestion that "the ligature might perhaps ulcerate through the tube which then healed behind it without stricture of its canal" was probably true, and the following case in a measure supported it. In 1898 Mr. Bland-Sutton removed an ovarian cyst; its very slender pedicle was tied with thin silk. Although recovery was uneventful the patient complained during many weeks of cramp-like pain on the side from which the cyst had been removed. The pains gradually passed away and 10 months later during menstruation the patient accidentally noticed on her napkin a tiny loop of silk which she saved. This was the loop of silk used to secure the Fallopian tube; it had ulcerated into

the tube and had been very slowly conducted into the uterus and so had escaped. A silk ligature applied to the cut end of a ureter in the course of a nephrectomy was sometimes conveyed to the bladder in the same manner. Mr. Bland-Sutton was glad to have the opportunity of stating that the opinion which he expressed to the society in 1892 had not been borne out by subsequent experience, and it was now abundantly clear to all that the mere application of a silk ligature to the Fallopian tubes could not be depended upon to obliterate permanently their lumina and thus prove an obstacle to pregnancy.—Dr. A. L. GALABIN said that he had met with two cases in which the attempt to sterilise by tying the Fallopian tubes had failed and which were those referred to by Mr. Doran. In that in which Dr. John Shaw had tied the Fallopian tubes with silkworm gut in performing Cæsarean section it was certain that the ovum had passed by the tube on which the ligature appeared to remain *in situ*, for on the side on which the ligature had cut through and the tube was divided the divided ends were absolutely closed. In the second case he had himself in performing Cæsarean section tied the tubes with kangaroo tendon and the patient became pregnant again within a year or so. Taught by the experience of these cases he had since then adopted the plan of cutting a piece out of the tubes between two ligatures, then pulling out the stump on each side as far as possible and cutting it off so that the open lumen was left at the bottom of an inverted cone of cellular tissue. None of the patients so treated had become pregnant again and he was inclined so far to regard this as a trustworthy method.—Mr. A. C. BUTLER-SMYTHE asked Dr. Herbert R. Spencer if he could give any information relative to the pregnancies of Mr. Bland-Sutton's patient. She had attended the Samaritan Hospital and had stated that subsequent to the operation she had twice miscarried with twins, which rather surprised her inasmuch as all her previous pregnancies had been single. He also wished to know if the fits had been benefited by the operation.—The PRESIDENT had expected to hear a hot discussion on how pregnancy could have taken place when both ovaries had been removed; but Mr. Doran had frankly admitted that a piece of ovarian tissue had been left behind at the second operation, so that there was nothing strange about the case. He was surprised to hear Mr. Doran advocate the removal of both ovaries entire when it was possible to leave a healthy piece. He thought it better to leave some ovary whenever possible.—Dr. AMAND J. M. ROUTH thought that sufficient cases could now be collected to explain the occasional occurrence of menstruation and ovulation after double ovariotomy, and he observed that in most of the reported cases a latent period of a few months or even years elapsed before menstruation again appeared. He thought it likely that a small piece of the hilum of one ovary might be left containing no Graafian follicles sufficiently developed to come immediately to maturity. He believed that such a piece of ovarian stroma, together with the follicles, became in a few months further developed, and ovulation and menstruation then recurred.—Dr. R. BOXALL remarked on the impossibility of making absolutely sure that sterility would necessarily result from ligature of the Fallopian tubes. The importance of the question often arose when operation was undertaken and the tubes were at the same time ligatured with the object of rendering the woman sterile; but it might also arise when from disease of the appendages operation was indicated. For instance, he had recently met with a case in which, owing to long-continued and recurrent attacks of inflammation, it became necessary to urge surgical interference with the appendages. To this procedure objection was raised both by the patient and by her husband solely on the ground that complete removal of the appendages would entail sterility. In that event cohabitation would be forbidden by their church. Eventually the symptoms became so urgent that operation was rendered imperative. Fortunately, it was found possible to retain a healthy part of one ovary, in consequence of which the menses had not been discontinued. Notwithstanding that the greater part of both tubes as well as one ovary and part of the other were of necessity removed no occasion arose for the separation, which they both so much dreaded, for it was possible to assure them that impregnation was not, by the operation at any rate, put beyond the bounds of possibility.—The paper was also discussed by Dr. HERBERT SPENCER and by Dr. W. JAPP SINCLAIR.—Mr. ALBAN DORAN, in replying, said that he was much interested in the discussion on attempts to sterilise a patient by tying or cutting the Fallopian tubes. He believed that in his own case a trace of healthy (not cystic) ovarian tissue was left in the right ovarian ligament. It was easy to extirpate all ovarian tissue when the ovaries were taken away with the uterus and not difficult when a pedunculated ovarian cyst was removed, as the ovarian ligament was elongated and very prominent. But when the base of the cyst burrowed and lay close against the uterus the ovarian ligament could rarely be distinguished. In one case where Mr. Doran was obliged to remove the uterus with the burrowing adherent tumour he found on examining the specimen that it would have been practically impossible to leave the round ligament or part of a pedicle without leaving also ovarian tissue, morbid or healthy. As it was with a cystic tumour, so it was with inflamed adherent appendages, and so it very often was with an ovary removed to check the growth of a uterine fibroid. In all these cases the operator dared not cut the pedicle sufficiently short to remove all ovarian tissue, for he knew that if he did so the ligature would probably slip. Hence it was not very hard to understand that in some cases menstruation or even pregnancy occurred after removal of both ovaries. In his own case the ovarian ligament with some healthy tissue had probably been flattened against the uterus and had thus escaped the ligature. After-histories of all abdominal operations were valuable, especially as to the fate of ligatures which were shed sometimes eight or 10 years after they had been applied.

Mr. A. W. MAYO ROBSON contributed a short communication on a case of Primary Ovarian Gestation. He pointed out that though he had operated on about 50 cases of extra-uterine gestation the present specimen was the only one of the series in which he had been able to prove ovarian gestation. Doubtless many of the cases described previously as ovarian pregnancy had been of that nature, but this was apparently only the fourth case in which absolute proof had been furnished by showing an early embryo in its membranes and contained in a sac in the ovary. The patient, who was 24 years of age, was admitted to the Leeds General Infirmary on April 11th, 1902, in a state of profound collapse. She stated that on the previous night, six weeks after her last menstrual period and a fortnight after missing her menses, she was seized with a sudden pain in the right side while engaged in blackleading a grate. She became very faint and pallid and soon she vomited. She was put to bed but the pain continued during the night and was much worse next morning. The pallor also increased. She was seen by her medical attendant (Mr. H. Towers) who diagnosed extra-uterine gestation and advised her removal to the infirmary. She said that she was a married woman but had never had any children. On admission the patient was very pale indeed. Her temperature was 98° F., the pulse was 130, and the respirations were 48. She complained of pain on the right of the abdomen, which was distended and did not move on respiration. It was very tense and tender, rendering palpation difficult, but a fluid thrill could be obtained on flicking with the finger. No tumour could be felt. Examined per vaginam the uterus was found to be fixed and Douglas's pouch was prominent. There was no history of bloody discharge from the vagina. A diagnosis of ruptured extra-uterine gestation was confirmed and immediate operation was advised. The patient was wrapped in warm blankets and taken to the theatre, where she was put on a heated operating table and anæsthetised with ether. The skin of the abdomen was then quickly washed and purified and a vertical incision was made above the pubes. When the peritoneum was opened there was a sudden gush of blood and clot. The right appendage was at once seized and clamped, as bleeding was going on, but before it could be brought to the surface it was necessary to detach the Fallopian tube which was firmly adherent to the bottom of Douglas's pouch, the ovary projecting above the tube, to which it was not adherent in any way. On the top of the ovary there was a firm mass surrounded by clot and on lifting this from the ovary a cavity was found in the ovary itself, into which the small ovum would easily fit. The left ovary and tube were examined and were found to be healthy. The mesometrium was then transfixed and the tube and ovary were removed after ligature. For the following description of the specimen, which was now in the museum of the Royal College of Surgeons of England, thanks were due to Mr. S. G. Shattock: "The parts removed are those of an ovarian pregnancy. They comprise the fimbriated end of the right Fallopian tube, the ovary and the ovum partly surrounded by, and embedded in,

recent blood-clot. Connected with the fimbriated extremity of the tube are two small pedunculated cysts, the larger about half an inch in diameter. The ostium is crossed by a thin membranous band of adhesion, beneath which a black bristle has been passed. The tube was firmly adherent to the bottom of Douglas's pouch and quite free of the ovary, the highest part of which projected above its level. At the inner pole of the ovary is a partly collapsed cavity about three-quarters of an inch in diameter. This cavity is widely open through a sharply defined semicircular rent of recent origin; in the thin summit of the lid-like portion there is a second narrow, less regular slit half an inch in length. Over the cavity in the ovary lay the lens-like recent clot which is mounted separately in the preparation. The clot is about an inch and a quarter in diameter and of concave-convex form; in its concavity, partly embedded in it and partly free, there lies a villous chorional sac. The sac has been opened in the right half of the clot and the membranes everted; connected with the everted membranes there is displayed a minute embryo about four millimetres in length." From the position of the right tube, the fimbriated extremity of which was firmly fixed to the bottom of the pouch of Douglas, leaving the ovary free above it, it seemed probable that the spermatozoa must have reached the right ovary through the healthy left tube.—The case was discussed by the PRESIDENT and Mr. ALBAN DORAN.

Dr. ARNOLD W. W. LEA showed a rare type of Malignant Ovarian Tumour.

Dr. C. H. J. LOCKYER brought forward a Uterus which showed rapidly-growing Epithelioma of the Cervix.

The PRESIDENT and Dr. WILLIAMSON showed specimens of Extra-uterine Gestation.

Dr. A. H. N. LEWERS having demonstrated some sections of Cancer of the Cervix in which from four to 15 years had elapsed without recurrence the subject was discussed by the PRESIDENT, Dr. WILLIAM DUNCAN, Dr. BOXALL, and Mr. MAYO ROBSON.

LARYNGOLOGICAL SOCIETY OF LONDON.

Cancer of the Œsophagus.

A MEETING of this society was held on June 6th, Mr. E. CRESSWELL BABER, the President, being in the chair.

A discussion on the Diagnosis and Treatment of Malignant Stricture of the Œsophagus was opened by Mr. CHARTERS J. SYMONDS whose address we hope to publish shortly.

Dr. HERBERT TILLEY related two cases illustrating the apparent simpleness of the early symptoms in Malignant Œsophageal Stricture. The first case was originally diagnosed as ulcer of the stomach. There was no difficulty in swallowing. On examining the larynx the left vocal cord was found to be paralysed and about three inches down the trachea a small nodular mass projected into its lumen. The patient died from hæmorrhage and on post-mortem examination a malignant ulcer of the lower end of the œsophagus was found. The mass in the trachea was a secondarily infected mediastinal gland. The second case occurred in a man, aged 51 years. He complained of loss of voice and inability to swallow solid food. On examination complete bilateral recurrent paralysis was found. Attempts were made to pass an œsophageal bougie but even the smallest one was arrested opposite the lower end of the manubrium sterni. On further examination a mass of stony hardness was observed in the region of the left lateral lobe of the thyroid. The patient died but no post-mortem examination was made. Dr. Tilley thought that these cases suggested that invaluable information as to the cause of the patient's symptoms might be obtained by the use of the laryngoscope.

Sir FELIX SEMON pointed out the value of the presence of laryngeal paralysis and enlargement of the cervical glands as aids to diagnosis. He thought that alterations in the voice were often present before the ordinary symptoms of malignant disease of the gullet. In cases where the disease affected the posterior aspect of the cricoid cartilage the substance of the crico-arytenoid muscles became affected and caused a myopathic paralysis of one or both of these muscles. This might produce respiratory defects of greater urgency than the difficulty of swallowing. Paralysis might also occur by involvement of the laryngeal nerves when the disease was situated lower in the œsophagus. He considered enlargement of the glands, especially those felt on deep pressure behind the clavicle, to be of diagnostic value. He agreed with the advice which Mr. Symonds had given—namely, in cases where great difficulty was experienced in passing a bougie, to prescribe a night's rest and a dose of opium previously to further attempts. He considered that the dangers of chloroform in these cases should not be underrated and related a case in which unfortunately death had occurred. He thought that functional or spasmodic stricture, apart from organic, certainly occurred.

Dr. E. CLIFFORD BEALE called the society's attention to the possibility of diagnosing growths of the œsophagus by means of the x rays and showed some photographic plates which had been kindly lent to him for the purpose by Dr. Hugh Walsham. He thought that this method of examination gave more information as to the amount of growth and thickening present. Referring to the case related by Mr. Symonds in which a patient, after gastrostomy, had been able to swallow with comfort, he suggested that this good result was produced by rest and freedom from irritation. Other similar cases had been reported and, acting on them, he was then treating a case by getting the patient to swallow hot water after every meal in order to wash the œsophagus and afterwards to swallow a sticky mixture of opium. The result so far had been most satisfactory. He agreed that intra-thoracic disease seldom caused dysphagia.

Mr. H. B. ROBINSON emphasised the importance, which had been pointed out by Sir Felix Semon, of the enlargement of the cervical glands and instanced a case where a mass of glands above the right clavicle had been the first sign which finally led to a diagnosis of stricture of the œsophagus. He also narrated a case of cystic adenoma of the thyroid which had caused dysphagia by pressure which was relieved by operation.

Mr. J. DONELAN related a case of malignant stricture of the œsophagus situated 16 inches from the teeth in which a long bougie had been of great use. Its introduction had been considerably aided by the use of cocaine and he suggested that adrenalin might also be useful.

Dr. J. DUNDAS GRANT related some difficulties which he had experienced in this class of case.

The PRESIDENT doubted the value of œsophagoscopy from a diagnostic point of view and referred to the value of letting a patient sip a solution of cocaine or eucaine before the introduction of bougies. He had not obtained much assistance from the Roentgen rays. As regards anæsthetics in these cases, he could not help thinking there was some peculiar danger. He asked Mr. Symonds if he had had any experience of œsophagectomy in these cases and if he would give a few more particulars about the risks of gastrostomy.

Mr. SYMONDS, in reply, thanked Dr. Tilley and Sir Felix Semon for raising the question of laryngeal paralysis and its value as an early diagnostic sign. He had seen cases where laryngeal paralysis had helped him in the diagnosis, but as a rule he had been able to settle it on other grounds. He could not recall any case where enlargement of the cervical lymphatics had led him to the diagnosis of malignant stricture of the œsophagus and was glad to learn of Mr. Robinson's case. He had had one case of spasm of the sphincter at the lower end of the œsophagus which might be called spasmodic stricture. Replying to Dr. Grant's difficulties he suggested the use of the steel bulb, without which he would certainly have missed many cases. He was interested in Dr. Donelan's case but held strongly that long tubes were inappropriate for disease of the cardiac orifice owing to the many disappointments which he had had. Answering the President as to the danger of gastrostomy he was not prepared at the present time to give a definite reply; if performed at an early stage it should involve very little risk.

DERMATOLOGICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on June 11th, Dr. H. RADCLIFFE CROCKER being in the chair.

Mr. MALCOLM A. MORRIS showed two cases of Bullous Eruption. The first of these was that of a young man, aged 24 years, who had suffered from annual attacks of bullous erythema for many years. The type was that of erythema iris and the present attack was the severest that he had ever had. The hands and feet, the extensor surfaces of the knees and elbows, and the mucous membrane of the mouth were all severely affected. The unusual point about the case was the anomalous mode of development, the bullæ

appearing first and leaving the infiltrated papules behind on their disappearance, instead of the erythematous papule being the initial lesion, as is the rule. The second case was that of a man, aged 55 years, suffering from Dermatitis Herpetiformis. This was a classical example of the disease of nine months' duration, the supposed cause being mental anxiety from the loss of his situation. The disease had started as a patch of erythema on the left arm and had become multiform and generalised. When shown the arms were the most severely affected, hardly any normal skin being visible, the whole area being covered with erythematous patches, papules, bullæ, and crusts. All treatment had been ineffectual and the disease appeared to be increasing in intensity.

Mr. WILLMOTT H. EVANS showed a case of Bullous Eruption, the patient being a woman, aged 39 years. 12 years previously she had taken some quinine and had almost immediately become covered with an erythematous eruption. 10 years previously she had also taken quinine and a bullous eruption had been the result. Now 10 days before admission she had taken what was calculated to be about four grains of quinine in the form of citrate of quinine and iron and the result was the outbreak of an intense erythematous eruption all over the face and arms, with large bullæ of the size of pigeon's eggs on the knees and feet. There was no affection of the mucous membrane of the mouth and the drug had caused no other symptoms than the eruption. The aspect of the patient somewhat suggested renal disease but the exhibitor had not yet been able to obtain a sample of urine for examination.

Dr. RADCLIFFE CROCKER showed two cases illustrating different Sequelæ of Vaccination. Both patients were females and both had been vaccinated in October, 1901, with calf lymph. In one of the patients the vaccinia had run an apparently normal course but the healing of the lesions had been accompanied by the formation of hypertrophic scars, so that when shown each of the four lesions appeared as a pinkish, shining, firm, and somewhat dome-shaped swelling, the hypertrophy not extending quite as far as the edge of the scar. The second patient had developed an attack of psoriasis for the first time in her life three weeks before exhibition, the first papules appearing on the sites of vaccination and the spread of the disease having taken place from these situations.—Several members stated that they had recently had under their care similar instances of initial attacks of psoriasis after vaccination.

Dr. E. G. GRAHAM LITTLE showed two cases of Tuberculosis of the Skin. The first case was that of a small child, aged two and a half years, who had suffered for 14 months from a small patch of verrucose tuberculosis on the dorsal surface of the right thumb. The patch when shown was of about the size of a sixpenny-piece, raised, horny, and showing on close inspection that soft cushion-like infiltration characteristic of the disease. A point of interest was that two months previously the little patient's father had died from phthisis after a prolonged illness. It was pointed out how likely a child of a little over a year would be to inoculate himself on the hand when crawling about a room undoubtedly containing dust contaminated with the bacillus tuberculosis. The second case was that of a child, aged 13 years, suffering from tuberculous adenitis in the neck who exhibited his second attack of the small follicular, acneiform variety of tuberculide. The present eruption affected the extensor surfaces of the arm and legs and the buttocks, and the scars of the previous attack of a year ago were visible upon various parts of the body.

Dr. RADCLIFFE CROCKER brought forward a case showing the After-effects of the Small Papular Tuberculide of the Face described by Bartelmy as folliculitis. The patient, a young man, had been treated by the application of mercurial plasters with entirely beneficial effects. The resulting scarring was all that remained after this treatment and in time this would flatten down sufficiently to become almost unnoticeable.

Dr. PRINGLE showed a case of Lupus Erythematosus. He reminded the members that the patient had been shown before and that the case had been published in the *British Journal of Dermatology* for 1900, p. 1. She had then been affected with multiple patches of epithelioma growing upon an old-standing lupus erythematosus. These growths had been successfully removed by a surgical colleague, but within the last few months a large mass had grown in the region of the right socia parotidis and had lately ulcerated. Further operation did not offer much hopes of success and he would point out that this case was in direct opposition to the view of Holländer that carcinoma on lupus erythematosus was a relatively innocuous form.

Dr. WHITFIELD showed a man, aged 30 years, who was suffering from very extensive Lupus Erythematosus of the Face affecting the whole of both cheeks, the bridge of the nose, both ears, several patches on the hairy scalp, and the inside of the lower lip and right cheek. The type was very much infiltrated with a relatively large amount of horny plugging and somewhat deep cribriform scarring. The fingers were also affected to some extent but the great interest of the case lay in a curious violet eruption on the chest and back which took the form of circumscribed infiltrated papules resulting in scarring. These were associated with a certain amount of ordinary acne and the question was whether these lesions were disseminated patches of lupus erythematosus or whether they were tuberculides. The exhibitor held the former opinion which was agreed with by most members present.

Dr. GRAHAM LITTLE showed a very classical example of Pityriasis Rubra Pilaris in a child. The face was in the usual diffuse, scaly condition, while the extremities showed the small follicular papules with horny spines and generalised hyperkeratosis. In addition to these there were one or two patches strongly suggestive of psoriasis and it was an interesting fact that a sister of the patient had undoubted psoriasis.

To compare with the above case Dr. ORMEROD showed a young woman suffering from extensive Lichen Planus of the Arms and Legs with unusually marked affection of the palms and soles. There were among the usual flat lesions on the arms well-marked follicular lesions with small spines—the acuminate papules of the disease—and it was pointed out how easily confusion might arise between the two diseases exhibited in the two patients.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Intra-peritoneal Rupture of the Bladder.—Hæmorrhage into the Spinal Cord during Pregnancy.

THE eleventh ordinary meeting of this society was held on June 4th, Professor T. R. FRASER, F.R.S., the President, being in the chair.

Dr. GEORGE GIBSON showed two patients suffering from Locomotor Ataxia with unusual symptoms. The first was that of a man, aged 41 years, who had an isolated paralysis of the internal rectus muscle of the left eye; there were no Argyll-Robertson phenomena or changes in the optic disc; the patient was subject to curious attacks of delirium. The second case was that of a man with few ataxic phenomena but with absolute atrophy of the optic nerve of the left eye and also the same in the right side to a great degree. He also showed peculiar twitching movements of the skeletal muscles.

Mr. F. M. CAIRD showed a male patient in whom he had performed double enterectomy for Tuberculous Stricture of the Small Intestine at one *séance*. The patient had suffered for six or seven years from gastric symptoms—pain and vomiting after eating. Diarrhœa had commenced 14 days previously to the operation. He was greatly emaciated and suffered constant pain. Nothing abnormal could be felt in the abdomen but the diagnosis was made of tuberculous stricture.

Dr. WILLIAM ELDER exhibited a boy who had suffered from Choreiform Movements since he had scarlet fever five years previously. During convalescence from this exanthem movements began to show themselves in the facial and oral muscles. These movements had gradually spread to other parts of the body. A peculiar distressing grunting noise was produced involuntarily by the contraction of the intercostal muscles. At times, as during service in church, he could control these motions, as also when making any voluntary efforts, as in holding his knife and fork or raising a cup. Intellectually he was correct but at times expletives escaped involuntarily. Dr. Elder rather thought that this was a case of paramyoclonus multiplex and not a case of chronic chorea (Sydenham).

Mr. H. ALEXIS THOMSON exhibited a patient after laparotomy for Purulent Peritonitis of Gonorrhœal Origin and Removal of the Left Ovary and Fallopian Tube. The

disease developed five weeks post partum. A second laparotomy had to be performed 10 weeks after the first on account of acute intestinal obstruction due to at least six constricting adhesion bands.

Mr. F. M. GRAHAM showed the Base of a Skull in which there was absence of the Right Lateral Sinus, &c.

Mr. CAIRD showed an Intestine in which there was a Double Tuberculous Stricture.

Dr. HARVEY LITTLEJOHN showed: (1) specimens illustrating Compression of the Brain from hæmorrhage; (2) specimens illustrating the effect produced on the hands and feet by prolonged immersion in water; (3) *a*, Uterus showing appearance in Menstruation and *b*, Uterus from a case of Abortion at the Fifth Month resulting from External Violence; and (4) Photographs of a case of Drowning.

Mr. SHAW M'LAREN read a paper on Intra-peritoneal Rupture of the Bladder with notes of two cases, one of which recovered after suture. He began by noting the comparative rarity of the accident. Rivington was able to record only about 190 cases in all. Recovery from the accident was a still rarer event. Alexander of New York in a paper published last year gave a list of 23 recoveries, in all of which the bladder was sutured. As regards the cause of rupture, blows on the abdomen containing a distended bladder, the crushing of a cart wheel, falls from a height, &c., were common. In Mr. M'Laren's second case the rupture followed on a simple fall on the abdomen, not from a height, but while the patient was ascending a stair. Mr. M'Laren did not think that it was proved that the accident could not occur but to a fully distended bladder (that was, when the pelvis was not broken). Several cases seemed to throw doubt on this generally accepted condition, notably one where it was stated that a man was thrown from a dogcart and sustained a rupture of the bladder half an hour after he had emptied it. This the patient was certain of and even though he had been drinking fairly freely, alcohol could scarcely be capable of producing so pronounced a diuresis as to fill the bladder to distension within half an hour. It must, however, be remembered that the "tone" of the bladder varied apparently at different times; in certain circumstances the demand for urination was urgent though the bladder contained only a small quantity of fluid, while at another time it might have collected a large quantity and yet its walls be lax enough to require further distension before micturition was called for. The rent was usually vertical; in only eight out of 110 cases was it transverse. There was one site where it occurred by far most frequently—viz., the posterior superior aspect of the bladder. Rivington explained this by stating that the lower part of the bladder was supported by the pelvis, while the upper part was surrounded merely by the yielding intestines and so the fluid escaped from this area when the bladder was crushed. Alexander held with others that the bladder was driven up against the sacral promontory and ruptured at this point. It was difficult to understand this from a study of frozen sections and, even if it were driven up, how the transverse projection of the bone could produce in almost every case a vertical rent. It was possible that the disposition of the muscular fibres of the bladder wall had not been sufficiently considered in this regard. There were three muscular layers in the bladder, two being disposed longitudinally and one circularly. This middle circular layer was not the strongest and its upper fibres tended to assume the longitudinal direction. In fact, the circular fibres were strong only in the lower and extra-peritoneal portion. The upper and back part of the vesical wall thus mainly consisted of longitudinal fibres and pressure on the contained urine would tend to drive it through between these strands. This would explain both the situation and the direction of the rupture. The symptoms were well known—shock, vomiting, inability to stand, hypogastric pain, urgent desire to urinate with inability to do so, bloody urine, and certain peculiarities in catheterisation. Shock was frequently, however, absent and in some cases the patient was able to stand, but in few could he stand upright. Desire to urinate might be wanting on account of alcoholic intoxication in the early stages and in the later from uræmic intoxication. Pain and tenderness in the hypogastric region Mr. M'Laren regarded as extremely important symptoms. He had found them present in all cases of rupture he had met with, both intra- and extra-peritoneal. The absence of this symptom must not, however, allow one to be misled. One symptom which Mr. M'Laren had not seen recorded was related by the first patient he treated: this was that as the cart passed over his abdomen urine squirted from his penis. The chief symptom was failure on attempting to urinate and on passing the catheter merely a few drops of bloody urine were obtained. This "bloody anuria" (*blutige anurie* of Rose) was most striking and characteristic and occurring after an injury to the abdomen it almost sufficed for a diagnosis. The catheter drew off only a few drops of bloody urine and found itself in a contracted bladder which permitted no movement of its point and only rarely did it pass through the rent in the bladder. In the latter case it might give exit to large quantities of urine almost or quite free from blood, especially in the later stages. Mr. M'Laren thought that the injection and inflation tests were useless; all the fluid injected might return though there was a rent in the bladder, and inflation test was really dangerous. Cases difficult of diagnosis occurred, as when the patient was able to walk after the accident, or even continued well for some days either urinating normally or through a catheter. The symptom of bloody anuria might possibly seem to point to contusion of the kidney or rupture of the urethra. In the first case, however, the bloody urine was normal in amount and there was great tenderness on pressure over the loins, while in the second there was a spontaneous flow of blood from the urethra and if urine was retained the bladder dulness was easily recognised. The cause of death after rupture was either peritonitis or uræmic intoxication. Why should septic peritonitis arise? It had been often proved that aseptic urine could be introduced into the peritoneal cavity without injury. In many cases where peritonitis was the cause of death the urine was normal. On the other hand, organisms could pass through the intestinal wall even though it was unruptured provided that the tissues of the wall were damaged. It was possible that the bruising of the intestines which must result from the blow which ruptured the bladder might permit the passage of organisms through its wall and so infect the extravasated urine. As regards treatment, this consisted in opening the peritoneal cavity and suturing the rent in the bladder wall. Should the mucous membrane be sutured as well as the other layers? Most surgeons merely passed one or two rows of Lembert's sutures through the muscular and peritoneal layers. Mr. M'Laren sutured the mucous membrane in his first case but he had only found one other surgeon (Mikulicz) who did so; catgut sutures, of course, must be employed. Except in a few cases a tube should always be left in the pouch of Douglas because they had to deal with a damaged peritoneum and bruised viscera. Mr. M'Laren also thought it was better not to tie in a catheter to drain the bladder but that it should be passed once every two to four hours for the first one or two days. In every case the bladder should be emptied by the catheter at the end of the operation. The notes of the two cases were as follows. Case 1.—The patient was a van driver, aged 33 years. A wheel had passed over his abdomen. There was inability to urinate. There was no collapse. He had swelling in the right hypogastric and umbilical regions. At the operation a vertical fairly clean cut rent from three to four inches long on the postero-superior aspect was found. The mucous membrane was stitched separately and then two rows of Lembert sutures were inserted. There was prolonged washing of the peritoneal cavity. Complete recovery ensued. Case 2.—The patient was a tailor, aged 45 years. While intoxicated he fell on the steps of a stair. At the operation large quantities of blood-clot were removed from the abdomen. There was a very ragged rent three inches long on the postero-superior aspect of the bladder. There was great prostration after the operation but the patient rallied when five pints of hot saline fluid had been injected into the median basilic vein. He urinated normally in two days. On the fourth day, however, symptoms of delirium tremens developed and he died six days after operation. Pelvic peritonitis was present at the sectio—slight leakage from the posterior sutures was found. In all, 23 recoveries were recorded and Mr. M'Laren's made the twenty-fourth.—Mr. CAIRD, Dr. A. MILES, Dr. HARVEY LITTLEJOHN, and Mr. ALEXIS THOMSON took part in the discussion which followed.

Dr. ALEXANDER BRUCE read notes of a case of Hæmorrhage into the Spinal Cord in a Pregnant Woman. The symptoms were sudden onset with acute tearing pain in the mid-dorsal region, extending into the extremities; complete and permanently flaccid paralysis of the lower extremities, abdominal walls, bladder and rectal sphincters; early abolition and subsequently slight return of deep reflexes;

slight dorsiflexion of the great toe on tickling the soles; rapid formation of sacral and gluteal bed-sores; painless and unconscious delivery of twins, with temporary relief to previous embarrassment of respiration; subsequent development of bronchitis; and sinking from exhaustion. Post-mortem examination showed a tubular hæmorrhage, mainly in the lower half of the dorsal region and occupying the grey matter, pushing the white substance aside without completely interrupting its continuity. In the upper dorsal and lower cervical region the grey matter was infiltrated with blood but to a much less extent. In the lower dorsal region a tubular structure with thick walls, evidently due to irregular closure of the central canal, was filled with blood which had ruptured into it. The source of the hæmorrhage was evidently an angio-glioma in the grey matter. There were several similar small angio-gliomata in the dorsal region under the membranes and in the white matter, and one larger in the postero-lateral columns at the level of the fifth cervical segment. The paper was illustrated by lantern slides showing the seat and distribution of the above-mentioned morbid appearances. Dr. Bruce discussed the etiology and pathology of hæmatomyelia and also referred to Dr. Amand Routh's paper on parturition in cases of paraplegia from lesions at various levels of the cord.—Dr. GEORGE A. GIBSON related a case of Sudden Onset of Complete Paraplegia in a woman, aged 47 years. The right mamma had been removed on account of carcinoma. It was therefore thought that the lesion in the cord was due to such a new growth there or that it was a case of acute transverse myelitis. The case was under observation for several months so that it was not likely to have been a hæmatomyelia. After death a fracture of the sixth dorsal vertebra was found. This had not been noted at the time of the onset of the paraplegia. Dr. Gibson thought that it was remarkable that Dr. Bruce's patient should have exhibited no phenomena due to the lesion in the cord prior to the onset of the hæmorrhage.—Dr. C. E. UNDERHILL and the PRESIDENT having spoken, Dr. BRUCE replied.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Epithelioma of the Vulva.—Repeated Ovariotomy.—The Use and Abuse of the Forceps.

A MEETING of this society was held on June 11th, Dr. JAMES RITCHIE, the President, being in the chair.

Specimens were exhibited by Professor A. R. SIMPSON, Dr. D. BERRY HART, Dr. J. HAIG FERGUSON, and Dr. W. FORDYCE.

Dr. D. A. CALLENDER read notes on a case of Epithelioma of the Vulva. The growth was removed but in six weeks there was recurrence and a second operation was carried out; there was, however, rapid advance of the disease with discharge of a large quantity of thin serous fluid. The x rays had recently been employed and after four applications the discharge had become much less, the pain had greatly abated, and the general health had improved.

Professor J. A. C. KYNOCH (Dundee) read a paper on Repeated Ovariotomy. Repeated ovariotomy raised the interesting question, What was to be done with the apparently healthy ovary in cases of operation for unilateral cystic disease? The exact clinical significance of papillomatous growths was a disputed question, but the researches of Pfannenstiel and Williams had done much to show their true character. The former had shown that papillomatous growths might be associated with perfectly simple ovarian cysts, causing implantation and metastasis on the peritoneum with ascites, and yet the condition might be permanently cured in many cases on the removal of the tumour. On the other hand he found that one-half of the cystic carcinomata of the ovary were papillary in nature and gave rise to true metastasis in the glands, the liver, and other organs. It was therefore in the case of papillary cysts that the removal, partial or complete, of the other ovary was of most importance, because it was difficult or impossible during the course of an operation to say with any degree of certainty whether they were dealing with a simple or malignant papillomatous tumour. The operator should inform the patient before operation that the other ovary might at the same time have to be removed. This was especially necessary during the child-bearing period. In women at or about the climacteric it would probably be a safe rule to remove the unaffected ovary in every case. In younger patients they had to consider the relative advantages of leaving the ovary, of partially excising it, or of removing it altogether. By leaving the ovary the absence of the distressing symptoms of an artificial menopause and the possibility of a subsequent pregnancy must be contrasted with the slight risk which the patient ran of a repeated ovariotomy. According to the statistics of Spencer Wells only in 2·6 per cent. of unilateral ovariotomies was the repeated operation necessary and of 228 ovariotomies 120 of the patients subsequently bore children. If patients could be kept under observation after operation so that early manifestation of recurrence could be detected there would not be the same danger in leaving the unaffected ovary. But in the case of papillomatous tumours the recurrent growth spread so rapidly that by the time the patients came under observation operation was frequently useless. When the other ovary showed incipient disease simple puncture with the knife or cautery might be sufficient. Of 10 cases treated thus by Martin during the course of an unilateral ovariotomy three of the patients subsequently became pregnant and in no case was a second operation required for recurrent cystic disease. In small œdematous and dermoid cysts resection of the ovary had the advantage in younger patients of probably removing the disease and at the same time leaving sufficient ovarian tissue to permit of ovulation and subsequent pregnancy. Mathai reported from Olshausen's Klinik six cases of pregnancy following partial resection of dermoid cysts. Mere resection of a papillary cyst was not safe; such a case of recurrence was reported by Odehman. Pfannenstiel wrote that in all cases of papillomatous, sarcomatous, or carcinomatous tumours of the ovary the other ovary must be removed at the same time, and in all forms of tumour the other ovary should always be removed in patients over 40 years of age. Professor Kynoch then gave detailed reports of three cases of recurrence in his practice. One was a multilocular cyst recurring in two and a half years in the other ovary; in another an ovarian cyst chiefly unilocular was followed by a unilocular papillomatous cyst in the other ovary 15 months afterwards; and in the third an apparently simple multilocular cyst was followed in nine months by a second ovariotomy when nodules were also found scattered over the peritoneum.—Dr. HART, Dr. F. W. N. HAULTAIN, Dr. J. LAMOND LACKIE, Dr. FERGUSON, and Dr. J. W. BALLANTYNE discussed the paper and Professor KYNOCH replied.

Dr. MICHAEL DEWAR read a paper on the Use and Abuse of Forceps in General Practice. Reference was made to discussions on the subject at the medical congresses at Montreal in 1897 and at Edinburgh in 1898. Most of the speaking on those occasions came from men who were engaged in hospital and high-class practice. Much was said about the great dangers attending the use of forceps to mother and child, but very few facts were given which showed the percentage of injuries said to be due to the use of forceps. In obstetric practice everyone must, or ought to be, an expert, and in many cases the practical training during the student curriculum was very deficient. Dr. W. J. Sinclair of Manchester five years ago had made a vigorous onslaught on the too great frequency with which forceps were used in practice and had urged that anything above from 3 to 5 per cent. of forceps cases was unnecessary. Others admitted that from 12 to 15 per cent. was a fair average. In making an estimate discrimination should be exercised as to whether the cases occurred in city or country practice. In the city the patients were often more or less anæmic, poorly developed, and often with some contraction of the conjugate which, though slight, would yet be sufficient to cause a difficult labour. By intercommunication the city woman had learned to be less patient and many among the working-classes demanded the help of chloroform and forceps soon after the arrival of the medical attendant. Among the higher classes there was more self-control and a well-trained nurse helped to calm the fears of the patient so that there was not the same importunity for assistance. If a woman was in hospital then she was surrounded by a discipline which compelled her to wait till the obstetrician thought it necessary to interfere; that no doubt accounted for the small percentage of forceps cases in hospital. In the country the women were more robust and owing to the greater segregation and the distance of their residences from that of their medical attendants they were taught to endure pain of all kinds more heroically. Many country women had a horror of the "irons," as they were called, and only when quite exhausted would they permit assistance to

be given. The percentage of forceps cases was thus very much smaller in the country than in the town. 30 years ago the percentage of forceps cases in the Edinburgh Maternity Hospital was 0·21, with a maternal mortality of 0·8 per cent. In the Dresden Hospital from 1883 to 1888 the percentage was 2·8, with a maternal mortality of 3·4 per cent. and an infantile mortality of 17 per cent. Recently the percentage in the Edinburgh Maternity Hospital was 10·6 per cent., with a maternal mortality of 1·3 per cent. and an infantile mortality of 4 per cent., while in the extern practice the percentage of forceps cases was 4·3 per cent., with a maternal mortality of 0·4 per cent. and an infantile mortality of 11 per cent. Several obstetricians maintained that 5 per cent. should never be exceeded, which might be correct and proper under the best conditions but which would be impossible to carry out in a working-class practice. Dr. Dewar stated that while he was in country practice from 1877 to 1881 he used forceps in 11 per cent. out of 700 cases; of this series the percentage in primiparæ was 20. Other medical men in the country had given their forceps cases as 10 per cent., 12·5 per cent., 13 per cent., 30 per cent., and 10 per cent. These numbers might be taken as the fair average in careful midwifery in the country. In his city experience of 300 cases Dr. Dewar applied forceps in 35 per cent., and he found the percentage of six other practitioners to be 35, 38, 39, 40, 45, and one of 10, but he stated that it had been 20 a few years ago. Regarding the maternal mortality Dr. Dewar had no death after forceps in his 700 cases in the country; among the children there were 20 deaths, or a percentage of 2·8. In his series of 300 city cases there was no death after forceps—indeed, only one in the whole number, from heart disease. Two infants died in the instrumental cases, or a mortality of 1·9 per cent. for forceps. Dr. Dewar also considered the mortality and the period of convalescence of the different classes of cases.—The paper was discussed by Dr. S. MACVIE, Dr. G. KEPPIE PATERSON, Dr. HAULTAIN, Dr. FERGUSON, Dr. HART, Dr. BALLANTYNE, and Professor KYNOCH, and Dr. DEWAR replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

First Stage of Labour.—Exhibition of Specimens.

A MEETING of this section was held on May 23rd, Dr. W. J. SMYLY being in the chair.

Mr. E. HASTINGS TWEEDY read a paper entitled "Observations on the First Stage of Labour: the Causal Relation of this Stage to Rupture of the Uterus." He said that the onset of labour ought to be reckoned from the moment of the establishment of uterine polarity. Uterine polarity was probably induced by an over-stretched condition of the lower uterine segment nerves brought about as a result of labour contractions. A fully dilated os was not always of a diameter sufficient to permit of the passage of the fœtus. The condition known as rigid os, with its thin knife-like edge, was in reality an os that had reached its maximum degree of expansion. In primiparæ especially an os in this state was readily torn, but in the event of its not quickly doing so it moved in a direction upward and backward in response to the more powerful pull exerted on it by the posterior uterine muscular fibres. In consequence of this the anterior cervical lip became enormously elongated and was erroneously spoken of as being incarcerated or nipped between the os pubis and the presenting part of the fœtus. The liberation of the lip necessitated the tearing of the cervix. A lip such as this became rapidly œdematous and often protruded through the vulva at the completion of labour. Under these circumstances the cervical rent, though extensive, could not be dealt with by immediate suture, not alone because of the great œdema but chiefly for the reason that there was never any posterior lip to which to stitch it. Occasionally the os did not tear after it had moved upward and backward. Then rupture of the lower uterine segment and of the anterior fornix of the vagina became probable. These structures would, under the conditions named, lie one on the top of the other and would be subjected to the counter pulls of anterior and posterior uterine fibres. Ruptures such as these took place insidiously, the only symptom which marked their onset being the moving of the rigid os upward and backward.—Dr. A. J. HORNE said that in his experience cases of ruptured uterus were usually associated with contracted pelves and were consequently unusual in Dublin where the condition named was seldom met with. He did not look on the strong pains as the principal cause: he rather inclined to the idea that insufficient dilatation or dilatation slowly occurring was the chief factor, the head being suddenly forced through rather than pressed through.—Dr. ALFRED J. SMITH said that he did not see much benefit from Mr. Tweedy's new definition. "Polarity" was hardly a practical term. The old definition of the beginning of labour was equal to all demands.—Dr. HENRY JELLETT said that he did not accept Mr. Tweedy's explanation of polarity; he associated it more with some regulating nerve-fibres connected with the higher nerve centres which regulated the muscular contractions in a manner analogous to the simultaneous contractions of the fibres of the body and relaxation of the sphincter of the bladder and the rectum. In his opinion the first stage of labour ended clinically with rupture of the membranes.—Dr. SMYLY said that Mr. Tweedy's paper dealt with two subjects—the first stage of labour and rupture of the uterus. Much depended on where he considered the polarity to begin; if he included the whole lower uterine segment the labour might be said to commence at the seventh month of pregnancy.—Mr. TWEEDY, in replying, said that he did not see that any analogy could properly be drawn between the bladder mechanism connected with urination and that of the uterus in the first stage of labour. The formation of the lower uterine segment during pregnancy caused considerable displacement of the vessels and nerves, as these had to course through this segment in order to reach the cervix. In consequence of this the relaxation of the os during the period of a labour contraction could be accounted for in a manner more simple than by inferring a special nerve centre which had so rarely to be called into existence.

Dr. SMITH exhibited two specimens of Double Pyosalpinx of Tuberculous Origin. The first consisted of tubes removed from a patient, aged 19 years, who had suffered from amenorrhœa for one year previously; the second consisted of tubes from a patient, aged 35 years, who had suffered from dysmenorrhœa with profuse menstrual flow. He also exhibited a large Pyosalpinx removed from the left side of a married woman who was anxious to become pregnant. In the latter case the right tube and ovary were apparently normal; the enlarged tube was intimately adherent and very tense and its contents showed tuberculous deposits and pure cultures of staphylococci. This was interesting as there was no history of the invasion and the right tube and ovary were normal.

Dr. HORNE exhibited a Uterus removed by Vaginal Hysterectomy. The patient was 50 years of age and was the mother of two children, her last pregnancy having taken place nine years previously. Menstruation remained regular until a year previously, when it ceased for three months and then became irregular. On examination the uterus was found to be freely moveable and in its normal position. There had been no watery discharge. Curettage of the uterus was performed to check the hæmorrhage. On examination of scrapings from the uterus Professor E. J. McWeeney reported:—"These are very succulent, richly cellular, and exhibit an adenomatous overgrowth of the uterine glands which appears to be undergoing malignant change, is in fact partly converted into adeno-carcinoma." Vaginal hysterectomy was thereupon performed. The convalescence was perfectly normal. The important points which he wished to call attention to were the absence of the usual symptoms associated with malignant disease, and the importance of having uterine scrapings carefully examined by the microscope in women near the climacteric when menstruation was irregular.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on May 27th, Dr. H. J. Campbell being in the chair.—Dr. F. W. Eurich gave a microscopical demonstration of (1) specimens showing Calcification of Arteries, Nerve Cells, and Capillaries in the Brain; and (2) Sputum containing an Aspergillus which was thought to have been the primary cause of the pulmonary disease.—Dr. W. Mitchell exhibited the cast of a Hand showing a Supernumerary Thumb.—Dr. J. H. Bell read a paper on Pulsating Exophthalmos. After reviewing the history of the disease and of its treatment and pointing out its great rarity Dr. Bell related the following case. The

patient was a man, aged 29 years, who was admitted to the Bradford Eye and Ear Hospital in July, 1896, complaining of prominence of the right eye together with a loud buzzing noise in the head. Ten days previously he had received a blow on the left eye during a drunken brawl. The next day on awaking he heard a loud noise in his head; the left eyelids were black and the right eyelids were not so. For some days there was vomiting and headache due probably to the drink which he had taken. The right eye then became prominent and he had diplopia for about a week. There was no history of syphilis. Examination showed the right eye to be prominent and there was paresis of the superior, inferior, and internal recti muscles. The vision of both eyes was equal to average normal. Ophthalmoscopical examination was negative. He worked for a week and said that his eye got fairly well and he then became ill with weakness and vomiting and had to go to bed and the eye became worse. He was then taken as an in-patient at the hospital. The right eye-ball was displaced downwards, outwards, and forwards. Pulsation developed and a loud bruit was heard with the stethoscope all over the head. The bruit was lessened by pressure on the right common carotid artery and was stopped by pressure on the left common carotid. The heart sounds were clear; the urine was normal. The ophthalmoscope showed fulness of vessels in the fundus but no pulsation and no papillitis. Digital compression by the patient was commenced on the left side and after a week was changed to the right side. It was carried on for two minutes hourly during the day and for one minute hourly during the night without causing much pain. After three weeks the vision was normal, the bruit remaining as before. From Oct. 14th Carte's tourniquet was applied daily for five months, averaging four or five hours a day. In February the noise occasionally stopped and the bruit sometimes could not be heard. On March 4th, 1897, the left common carotid was tied. The bruit at once ceased but had returned by the time that the patient had been put to bed. On the following day the bruit was heard faintly at the vertex, then for 19 days no bruit could be heard, but it returned on March 24th, though it was not so loud as before. On April 21st the man was made an out-patient. On May 11th he was re-admitted, the vision of the fundus oculi and the noise in the head being the same as they were before. Compression by means of Carte's tourniquet of the right common carotid was now practised daily but without any result as regarded the symptoms. On July 22nd the right common carotid was tied. The bruit ceased and there was no pulsation in the temporal artery. On the next day the patient was drowsy, with slow cerebration, there was no bruit, and the pulsation had returned in the temporal artery. On the 24th he became hemiplegic on the left side, with hemianæsthesia. There were chronic and tonic spasms of the right side. He died on the next day. The necropsy showed softening of the right cerebral hemisphere. The vessels at the base were normal. The right cavernous sinus was dilated but no further abnormality was detected. In his remarks on the case Dr. Bell said that the following points were of interest: (1) the blow was on the left eye and the exophthalmos was on the right side; (2) the vision was practically normal throughout; (3) the bruit was controlled by pressure on the opposite carotid artery; and (4) the patient was able to bear such long-continued compressions of the arteries without suffering much discomfort.—Dr. S. Lodge, jun., read the notes of a case of Tuberculous Tumour of the Middle Lobe of the Cerebellum which ended in sudden death. The brain from the case was shown.—Mr. J. Phillips made some remarks on the Treatment of Burns. He advocated the use of gauze soaked in 10 per cent. eucalyptus oil. He said that burns treated in this way did not require such frequent dressing as when ointments were used and further that the discharges could soak through and be taken up by an outer layer of some absorbent material, thus preventing the healing surface from being constantly bathed in pus.—Dr. A. Bronner made remarks on the Use of the Electro-magnate in Ophthalmic Surgery. He advocated the use of very powerful magnets and described some of these instruments together with the methods of their employment.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on June 12th, Dr. Heywood Smith, a vice-president, being in the chair.—The President, Dr. J. Halliday Croom, had sent for the consideration of the Fellows the following two specimens: 1. A Uterus removed for disease diagnosed from microscopical examination to be malignant but proving to be only recrudescing fibroid. His note suggested that similar cases might account for some alleged cures of cancer by hysterectomy. 2. A Uterus and Placenta removed after delivery of a living child by Cæsarean section on account of a large fibroid obstructing labour.—Dr. H. Macnaughton-Jones read notes of a case of Albuminuria in which early in the seventh month without rupture of the membrane or any laceration of the cervix he had in 20 minutes effected dilatation by means of Professor Bossi's instrument.[1]—Dr. Heywood Smith showed Kurz's Suture Forceps, one blade of which acted as needle-holder; the other, on closing the instrument, seized the threaded needle and, when the blades were separated, withdrew it.—In a paper entitled, "Is there any Real Deciduoma Malignum" Dr. Herbert Snow questioned whether the malignant developments immediately following and often unmistakeably due to the trauma of parturition showed any title to a special term differentiating them from cancerous new growths in or about the uterus apart from gestation. Micro-photographs Dr. Snow considered misleading where malignant cell-growth was concerned; a conscientious drawing might convey the truth, but a micro-photograph could not do so. Clinically, the lesions in no way differed from those of uterine carcinoma, sarcoma, or myosarcoma of the uterus under the increased vascular tension of pregnancy. Even in the most acute forms of cancer some time was required for the development of widely sundered metastases, and from what they knew of malignant disease elsewhere it was highly improbable that the extensive lesions met with in many cases could have commenced during pregnancy, as cancer was never set up while healthy cell-proliferation was going on. The only inference to be drawn was that the malignant development began before conception and that the phenomena of cancer of the uterine body, always obscure and insidious, were masked by the pregnancy. The only valid treatment was complete hysterectomy.—Dr. Heywood Smith was inclined to attribute greater value to micro-photographs than Dr. Snow attributed to them; a drawing was done with a certain amount of bias and might accentuate points that a photograph would represent with greater truth. If the disease originated in the decidua a theoretical distinction might be drawn between it and malignancy arising in the wall of the uterus. Many patients seemed to have lost ground very rapidly after the use of the curette.—Dr. Macnaughton-Jones held that practically they must recognise deciduoma malignum as a malignant disease connected with the products of conception, with characteristic profuse hæmorrhage and tendency to necrosis. Whether it approached carcinoma or sarcoma in character was of little importance compared with its early recognition and prompt extirpation.—Dr. J. J. Macan pointed out that widely as Veit differed from Marchand as to the nature of the disease they entirely agreed as to its clinical aspects and all its essential microscopical characteristics. In view of the number of recorded cases it seemed idle to deny the existence of a peculiar form of malignant disease intimately connected with pregnancy for which, out of the dozen or score of names that had been given to it, "chorio-epithelioma malignum," the one suggested some years ago by Marchand, was now most generally acceptable.

[1] THE LANCET, March 1st, 1902, p. 594.

AFFILIATED BENEFIT NURSING ASSOCIATIONS.—The ninth annual conference of the Affiliated Benefit Nursing Associations for the supply of cottage nurses on the Holt-Ockley system was held on June 13th at 66, Ennismore-gardens, S.W. Lord Ancaster, who presided, said that during the past year the associations had made great progress and had met with considerable success. There was great difficulty in getting sufficient nurses to supply the demand. Miss Broadwood, the honorary secretary, said that during the year which ended on March 31st, 1902, 70 nurses were sent into training and placed on the cottage nurses' register. Of these 35 were trained at Bury House and others in different districts or in maternity or cottage hospitals for periods varying from four weeks to 12 months. In regard to the work carried on by the associations in cottage nursing they did not want to fall back on district nursing because they were convinced that it was often for the benefit of the patients to have the entire services of the nurses during the time the illness lasted and there were certainly instances in which neither patient nor medical man would be satisfied with the attendance of a nurse for an hour or an hour and a half a day.

Reviews and Notices of Books.

Visual Œconomics, with Rules for Estimation of the Earning Ability after Injuries to the Eyes. By Professor H. MAGNUS, M.D. Breslau, and Professor H. V. WÜRDEMANN, M.D. Milwaukee, Wisconsin. Milwaukee: C. Porth. 1902. Pp. 144. With five Plates. Price $2·50 (10*s.*).

CONSIDERING the numerous cases of injuries to the eyes that occur in civil life, entailing more or less impairment of vision and consequent loss of earning powers, it is surprising that so few appear in the law courts. Probably the majority are settled by arbitration, but when they do become the subject of litigation it is soon perfectly clear that the medical experts, the judge, and the jury have no kind of standard to which they can refer or on which they can rely to form an estimate of the money value of the damage done. The sum awarded is determined by a consideration of the circumstances of the plaintiff, the wealth of the defendants, and the opinion of experts, which is not infrequently contradictory. Much injustice is thus often inflicted.

The authors of this work state that the loss of an eye has in America been valued at sums varying from $1000 to $7000 (from £250 to £1750). Many circumstances have to be taken into consideration before justice can be done and the authors endeavour to deal with the subject in a mathematical and actuarial spirit. Their method of proceeding is explained in the following sentence: "Normal physiologic vision consists of a series of different factors—the central acuity, the visual field, light and colour senses, the adaptive faculty, the muscular movements, and the cerebral processes—all acting together in creating the sense of sight. We may, therefore, regard the act of seeing as a sum whose numerals are formed by the different functions; if one numeral be taken from the sum which represents the complete act of seeing, then the balance will be left—i.e., vision will be damaged to the extent of the loss of one of these visual functions; but vision is yet in existence in a limited way." A relative value must be assigned to each of these factors and this value must be dependent on the avocation of the individual, the effect of the lesion on the earning power of the patient, the prospect of recovery, the capability of the normal or uninjured eye learning to work, and other considerations to which we need not here refer. These points are treated mathematically and formulæ are given which will prove fascinating to some of our readers. Examples are given of the application of the formulæ to young and old artisans, to an architect or draughtsman doing fine work, to a travelling salesman, and to an iron moulder.

The treatise is founded on the essay by Professor Magnus on the estimation of the pecuniary value of injuries to the eye, but is practically a new work, having been rewritten by Professor Magnus and Professor Würdemann. It will surely fall into the hands of barristers and woe be to the medical witness who is not able to hold his own and has not made himself master of the contents. We recommend it strongly to everyone who is likely to be called as a medical expert in accidents affecting the eyes.

Introduction to the Study of the Dependent, Defective, and Delinquent Classes and of their Social Treatment. By CHARLES RICHMOND HENDERSON, D.D., Professor of Sociology in the University of Chicago. First English edition enlarged and rewritten from first American edition. London: D. C. Heath and Co. 1902. Pp. 397 and viii. Price 7*s.* 6*d.*

THE author's work, we are told in a puff preliminary which is marked with three asterisks and which appears on page i., has been welcomed with acclamation in some parts of America. "The first American edition was received in the United States as an extremely important contribution to the study of some of the gravest problems which society has to consider and copies of the edition are very difficult to obtain." The work before us, we are told, "although nominally a reissue of the former one, is practically a new book, it having been almost entirely rewritten in the light of criticism and further experience in charity organisation work." It seems, therefore, that as this is, according to its author, practically a new book it need not be taken for granted—we are not compelled as a matter of obligation to believe without inquiry—that this book, like the rare first edition, is an important contribution to "systematic study of the nature, condition, and social relation of dependents, defectives, and delinquents."

We cannot imagine that the book will be of use to those of our countrymen who are interested in this study or that it will, as the author supposes, "promote an understanding of the reality under consideration" or lead to "the goal of knowledge." The book, however, contains a few literary gems which it may be worth while to preserve. The sentiments expressed are not unlike those which were formerly in use in this country to improve the mind of the student of penmanship whilst he was employed with a quill in imitating the calligraphy of his teacher. Here are examples: "The dry light of science is focussed in the lens of affection" (p. 1). "Observation is the prime source of real knowledge" (p. 3). "All human beings are dependent on parents in infancy and helplessness is natural to the babe." "Extremes are met" (p. 74). We refrain from quoting more, for the following paragraph, which is to be found in the chapter on "The Criminal before the Law," seems to breathe out threatenings and slaughter against over-quotation (which is pilfering): "The more refined and just estimate of the value of literary products has created copyright laws protecting authors from theft of their spiritual labors." We are not informed how an "estimate" came to create a law.

We fear we may have given an unduly favourable view of the book and it is necessary therefore to warn anyone who might wish to read it that we have given specimens only of the most striking passages. In former days such excerpts might have been printed under the title of "The Beauties of Dependents, Defectives, and Delinquents." The book is illustrated by a bad reproduction of a photograph, or a reproduction of a bad photograph, of a most inartistic medal issued by the American Numismatic and Archæological Society to commemorate "the Twenty-fifth National Conference of Charities and Correction."

Contributions to Practical Medicine. By Sir JAMES SAWYER. Third edition, revised and enlarged. Birmingham: Cornish Brothers. 1902. Pp. 209.

THE lectures which comprise these contributions to practical medicine have been revised, pruned, and supplemented for the purpose of a third edition which as regards both size and finish is a far more ambitious volume than the two which preceded it. The lectures contain a fund of useful knowledge which has been acquired during a long and useful career as a physician in active practice and they cannot fail to arouse the interest not only of those who are themselves in practice but also of those who have still to learn the art and science of medicine. The first two chapters discuss the causes and the cures of insomnia which, for the purpose of description, is classified as symptomatic and intrinsic or in a somewhat more amplified form as psychic, toxic, and senile. The appetite for sleep, to use the author's quaint expression, should only be encouraged by natural means and by resorting to a variety of devices for changing the current of conscious cerebration—devices which are described in detail and include among others the practical method of the late Mr. Gardner, which was

maintained as a secret until revealed by Dr. Binns. Symptomatic insomnia, according to Sir James Sawyer, should be treated on the principle of "*causâ cessante, cessat et effectus*"—a principle, by the bye, which has no general application to the operations of living protoplasm and clearly no special application to a rhythmical process such as sleep. The habits and periodicities engendered in the human body persist long after the stimulus which has evoked them ceases to operate. But this is a mere detail; the advice and recommendations which Sir James Sawyer supplies for securing the blessings of sleep are full of resource and should be very helpful to many of those who are often at their wits' end to know to what expedient to turn to alleviate inveterate cases of insomnia.

Gastralgia, which is the subject of the next chapter, receives a very fine clinical description and the author advises his readers not to diagnose cancer or gastric ulcer from merely subjective symptoms and not to assume that a patient is dyspeptic because he has pains in his stomach. As regards the treatment Sir James Sawyer boldly states that gastralgia, which is a more common complaint than is generally supposed, can be "cured" by arsenious acid which he recommends to be given in pill-form and in doses of $\frac{1}{10}$th of a grain combined with two grains of extract of gentian.

The subject of the Accentuation of the Pulmonary Second Sound of the Heart has a chapter to itself and as a diagnostic sign of increased tension in the lesser circulation it is regarded by Sir James Sawyer as pathognomonic. The author has frequently referred before to the significance of this physical sign and we believe he was one of the first to indicate its importance in the diagnosis and prognosis of mitral disease.

The treatment of habitual constipation, of eczema, of pulmonary tuberculosis by chloride of calcium, and of hæmorrhoids by unguentum ranunculi ficariæ, forms the subject matter of some excellent chapters which contain many invaluable suggestions of an entirely practical character. Ether as a vehicle for drugs requiring administration by the skin is apparently a favourite subject with Sir James Sawyer and for the purpose of testing its value he has conducted a series of experiments and has drawn up a formula for the exhibition of various drugs by this means which he claims to be entirely satisfactory. We cannot, however, convince ourselves that this method has any therapeutic advantage over inunction of the same drugs with valsol or vasogen as the vehicle, and, further, there are several practical objections to the use of ethereal solutions which readily suggest themselves.

This little book, with its quaint expressions and old-world air, is well suited to a profitable and enjoyable hour's reading.

The Academic Gregories. By AGNES GRAINGER STEWART. Famous Scots Series. Edinburgh and London: Oliphant, Anderson, and Ferrier. 160 pp. Price 1*s.* 6*d.* net.

THE Academic Gregories well deserve a place amongst the Scottish worthies who have been the subjects of this biographical series, and this work has been carefully and lovingly done by one whose intimate knowledge of the history of Scotland and whose keen sense of the humour of its people have combined to make the book extremely entertaining—it is instructive without being dull. It is not too much to say that most of the talented Gregorie family are entirely unknown to the vast majority of English readers, and with the exception of him who gave a powder to the world it is doubtful whether any one of them is at all a familiar figure. Many of them are well worthy of acquaintance. They were a fighting race and came of the Macgregors (of whom was Rob Roy) and they assumed the name of Gregorie before the year 1603. The first of them to obtain distinction was the Rev. John Gregorie of Drumoak, who suffered for his faith—he was an Episcopalian—and for his loyalty to Charles I. On one occasion he was somewhat discourteously treated by the Mr. Cant whose name has lived after him. From a contemporary account of the proceedings it appears that "Mr. Johne Gregorie ..... at the visitatioun of the Kirk of New Abirdene teichit most lérnidlie upone the 4th verss of the 2nd chapdour to the Collosians and reprehendit the order of our Kirk. ..... Mr. Andrew Cant, sitting besyde the reidar, as his use was quicklie cloissit the reidaris buke, and laid down the glass befoir it wes run, thinking the minister sould the sooner mak an end." In this, however, he reckoned without his host, for "he beheld and preicht half ane hour longer nor the tyme." The punishment inflicted was certainly a severe one, but in the circumstances it was possibly deserved. Cant, however, was allowed to preach back, and "he raillit out in his sermon aganes the said Mr. Johne Gregorie's doctrein." A truce between the combatants was ultimately arranged by the "mediatioun of the toune's balleis at a coup of wyne" when "they twa war satled with small credet to Cantis bussines."

A strong fighting tendency was manifested by most of the Gregories. The combative impulse which caused the Rev. Johne to fight Cant in the days of the Stewarts led his descendant Professor James Gregory to attack a brother physician with a stick. This occurred within the precincts of the University of Edinburgh and the assailant was prosecuted for assault and mulcted in damages. Most of the members of the family had a very good conceit of themselves and seem to have been richly endowed with the critical faculty. Dr. James Gregory's advice to Burns for the emendation of his verses is not devoid of interest. He did not like the title "On seeing a wounded hare limp to me, which a fellow had just shot at." "Fellow" was wrong, "it is but a colloquial and a vulgar word." "Shot," he continues, "is improper too. On seeing a *person* (or a sportsman) wound a hare, it is needless to add with what weapon, but if you think otherwise you should say with a *fowling-piece*." The Professor then promises Burns that if he will call on him he will show some more poems written by a Mrs. Hunter. "Mangled" is a coarse word. As an emendation for blood-stained, he opines that "bleeding bosom is infinitely better." Hamlet's estimate of Polonius is not entirely inapplicable to Professor James Gregory, yet he was a physician of discernment; he advocated the advantages of "change of air" and did not prescribe phlebotomy in all cases. He succeeded Cullen in the chair of Medicine at Edinburgh, lectured in a cocked hat, and accumulated a considerable fortune.

John Gregory, the father of Burns's critic, was born in 1724 and was professor of Medicine in the University of Edinburgh from 1766 to 1773. He had an interesting career. After studying anatomy at Edinburgh under Munro he went to Leyden and became the pupil of Albinus. Here he met Charles Townsend and Wilkes whom he described as a man "who wanted to be a fine gentleman and man of taste, which," he said, "he never could be for God and Nature had been against him." On his return journey he met the charming lady who afterwards became Mrs. Garrick. He went for a time to King's College, Aberdeen, and whilst he was there married a beauty and an heiress—the Hon. Elizabeth Forbes. In 1752 they went to London. He was made a Fellow of the Royal Society and through Mrs. Montague he became acquainted with the members of the literary society of that time, Johnson, the Burneys, Sir Joshua Reynolds. In 1756 he returned to Aberdeen. It was then that the Aberdeen Philosophical Society was started. It was a club which met at a tavern, wine was to be found on a side table and the evenings are described as having been "merry." Sometimes an essay was read. In the case of

Gregory as a rule his "discourse" was "not readie." Then a philosophical discussion was held and frequently Hume's sceptical speculations were attacked. Reid, one of the party, wrote to Hume to tell him that his company (although they were all good Christians) "would be more acceptable than that of Athanasius." Dr. John Gregory was an advocate for keeping children warm and did not approve the cold morning bath which it may surprise many people to learn was *de rigueur* in every well-constituted Scottish nursery in his time. Mrs. Montague visited the professor when she was getting old and she did not "find acceptance" as the Scots have it in Edinburgh society.

It is quite impossible to mention all the illustrious Gregories, but enough it may be hoped has been said to show that the book is well worth reading. It is more than the history of a family, for it gives incidentally pleasant and graphic sketches of the home-life of the Scottish people as seen from the brightest side by a sympathetic student.

LIBRARY TABLE.

Traité de la Chirurgie d'Urgence. (*A Treatise on the Surgery of Emergencies.*) By FÉLIX LEJARS, Professor Agrégé at the Faculty of Medicine of Paris, Surgeon to the Tenon Hospital, and Member of the Society of Surgery. Third edition, revised and enlarged, with 751 figures, of which 351 are drawn from nature by Dr. E. DALEINE and 172 are from original photographs. Paris: Masson et Cie. 1901. Pp. 1045. Price 25 francs.—We have noticed an earlier edition of this work and all the praise which we have given to that is equally applicable to the present issue. Extensive alterations have been made, many chapters have been rewritten, and others are entirely new. Among these may be mentioned those on hepatic, sub-diaphragmatic, and perinephritic abscesses, irreducible and strangulated prolapses of the rectum, diaphragmatic hernia, acute osteomyelitis, and burns. Such extensive alterations have necessitated 134 additional illustrations and 133 extra pages. The general idea of the work is to provide the surgeon with all that he needs to know when called upon suddenly to deal with an emergency. A little consideration will show everyone that emergencies will include not only traumatisms but also many other conditions. To treat successfully sudden calls on his skill the surgeon must accustom himself to be prepared for these emergencies before they arise and this volume should prove valuable as an aid for this purpose. The illustrations are very numerous—for instance, there are 12 figures to illustrate the method of marking on the skull the fissure of Rolando and four figures show the several stages of Kocher's method of reduction of a dislocated shoulder. Some illustrations are given which demonstrate how some manipulations should *not* be performed. In all there are 18 illustrations of the reduction of a dislocated humerus. We commend the volume to the attention of all surgeons who read French.

Photographic Atlas of the Diseases of the Skin. By GEORGE HENRY FOX, A.M., M.D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, &c. Parts 13, 14, 15, 16. Philadelphia and London: J. B. Lippincott Co. 1901. Price 6*s.* each part.—These four parts complete this useful atlas, the previous parts of which we have already noticed. They fully maintain the high level of the earlier portions and the whole will form a most valuable atlas of cutaneous pathology. The photographic method has many excellencies; its fidelity to truth as to the shape and size of lesions should count for much. The misrepresentation of the colour of the morbid condition is but a minor defect and in these plates this is to a great extent overcome by the colouring which has been added. The text is chiefly concerned with therapeusis and is likely to be of value to those who have had little experience in the treatment of skin diseases.

A Manual of the Diseases of the Eye and Refraction, including Treatment and Surgery. By GEORGE M. GOULD, A.M., M.D., formerly Ophthalmologist to the Philadelphia Hospital, and WALTER L. PYLE, A.M., M.D., Assistant Surgeon to Wills Eye Hospital, Philadelphia. Second edition, revised and enlarged, with 109 illustrations, some of which are coloured. London: The *Optician and Photographic Trades Review.* 1900. Small 8vo. Pp. 295.—This little manual is divided into two nearly equal parts. The first deals with the mode of examination and with the refraction and functional anomalies of the eye; the second deals with the diseases of, and the ordinary operations upon, the eye. Dr. James Thorington, a well-known authority on the subject of the refraction of the eye, has written the chapter on Retinoscopy. The theory of the ophthalmoscope is briefly but well given. There is nothing in the account of the diseases of the eyes calling for special notice. The symptoms of the various affections are shortly described and the treatment is in accordance with that generally adopted. Of the illustrations the least satisfactory is that which forms the frontispiece, stated to be after Jaeger, but which might advantageously be replaced by a better executed chromo-lithograph of the fundus. Judging from the place of issue it seems to be intended as a manual to be studied by those who are about to present themselves as candidates for the examinations held by the Spectacle-makers Guild or Society.

JOURNALS AND MAGAZINES.

The Journal of Physiology. Edited by Sir MICHAEL FOSTER, K.C.B., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXVIII., No. 3. May 28th, 1902. London: C. J. Clay and Sons. Price 5*s.*—The contents of this number of the *Journal of Physiology* are: 1. Fatigue in Non-medullated Nerves, by T. Grigor Brodie, M.D. Lond., and W. D. Halliburton, M.D. Lond., F.R.S. These experimenters, having observed that the assertion that the nerve fibres are insusceptible of fatigue rests on the excitation for long periods of time of medullated fibres, determined to repeat with some modification the experiments on non-medullated fibres. They selected the nerves distributed to the spleen and found that even after many hours of stimulation no evidence of fatigue could be demonstrated; nevertheless, they obtained proof that certain non-medullated as well as medullated fibres are injuriously affected by prolonged faradic stimulation, so that the spot which has been excited is no longer excitable until a considerable period of rest has elapsed. 2. A Note on Fœtal Muscle-spindles, by Laura Forster, M.D. Berne. A description is given of the appearances presented by muscle in fœtuses of the age of four, five, and six months. Dr. Forster shows that in the youngest embryo of these three the sheath of the muscle-spindles is very thin, that no lymph spaces are to be seen, and that the size of the fibres is more uniform than in the older embryos. 3. On the Formation of Lymph by the Liver, by F. A. Bainbridge, M.B. Cantab. Amongst other results it appears from Dr. Bainbridge's experiments that the intravenous injection of moderate quantities of sodium taurocholate or of pure hæmoglobin leads to an increased flow of lymph from the liver and to increased metabolic activity of the liver cells. 4. On the Local Reactions of the Arterial Wall to Changes of Internal Pressure, by W. M. Bayliss, with 11 figures in the text. Mr. Bayliss demonstrates that the muscular coat of the arteries reacts like smooth muscle elsewhere to a stretching force by contraction and to a diminution of tension by relaxation. These reactions are of myogenic nature and are independent of the nervous system and can be observed not only in the living state but

in excised arteries some hours after death. 5. A Method of Estimating the Oxygen and Carbonic Acid in Small Quantities of Blood, by Joseph Barcroft, B.Sc., and J. S. Haldane, M.D. Edin., F.R.S., with three figures in the text. The apparatus consists of a small glass vessel attached by tubing to a pressure gauge of narrow bore. The oxygen in the blood can be liberated by potassium ferricyanide and the resulting increase of pressure measured by means of the gauge and from this the volume of oxygen can be calculated. By similar manipulation, with the use of tartaric acid in the place of the potassium ferricyanide, the carbonic acid is subsequently determined. 6. Intestinal Absorption of Solutions, by E. Waymouth Reid, M.B.Cantab., professor of Physiology in University College, Dundee, St. Andrews University. The experiments of Professor Reid show that a physical explanation of absorption is not admissible. 7. The Proceedings of the Physiological Society.

ERRATUM.—The price was wrongly stated in our review of Gaylord and Aschoff's "Pathological Histology." Our reviewer gave the price as 5*s.* 6*d.*, whereas it should have been 31*s.* 6*d.* net.

New Inventions.

PORTABLE SPRAYING APPARATUS FOR DISINFECTION.

A CORRESPONDENT in whose judgment we have confidence has written to us in reference to the letter of "M.O.H." whose inquiry as to the best form of portable spraying disinfecting apparatus appeared in THE LANCET of May 31st, p. 1562. Our correspondent says that he has tried every variety of such apparatus that has come to his knowledge, but that he has found most of them to be mere toys. He makes an exception in favour of a spray recommended by Dr. W. Leslie Mackenzie of Edinburgh, a medical inspector of the Local Government Board for Scotland. This spray, he says, answers admirably but is rather heavy and clumsy to use. It is made by Messrs. Benton and Stone, brassfounders, Bracebridge-street, Birmingham. We have quite recently learned, however, that the Thresh Disinfector Company has succeeded in diminishing the weight of Dr. Mackenzie's apparatus by nearly 50 per cent. and has so modified it that it can be carried on a bicycle. The apparatus consists of a short force pump with air chamber attached to a foot-piece. A rubber section tube dips into a collapsible canvas bucket holding enough solution to spray an ordinary-sized room. The spraying nozzle is attached to a suitable handle and connected to the pump by about six feet of especially strong rubber tubing. Upon working the pump a very effective spray is produced with which the ceiling, walls, floors, and furniture of a room can be speedily covered with disinfecting solution. Additional lengths of brass rod are provided and a cross piece carrying two nozzles, so that large and lofty apartments or tents can be easily disinfected. When not in use the whole apparatus folds up and packs in the flexible bucket, occupying a space of 18 inches by six inches. The pressure obtained by the pump is from 40 to 60 pounds to the square inch and the spray produced is so fine that in the sunshine beautiful rainbows are visible in it. The apparatus therefore is not a toy like many of the portable sprays and can be thoroughly relied upon. Its cost is two guineas. For many purposes of disinfection where spraying is not available Dr. Thresh's portable "emergency" disinfector is very useful and satisfactory. It consists of an oblong chamber five and a half feet high and two and a quarter feet square, which is found to be sufficiently large to take an ordinary-sized bed when properly folded. The apparatus is heated by an oil furnace specially devised for the purpose, weighs under two hundredweight, and can be moved on a hand-cart. Both the spraying apparatus and the disinfector are made by the Thresh Disinfector Company, Limited, 16, Great George-street, Westminster.

AN INHALER FOR GIVING MIXTURES OF ETHER AND CHLOROFORM.

THE apparatus here described has been devised by me to meet a want which I have personally felt in the administration of anæsthetics and which I believe may have been shared by others who believe in the advantages of mixtures. The object I have had in view has been to give ether or chloroform, singly or together, in any proportion, during an administration and to be able to vary that proportion at will at an instant's notice. With these considerations I have had constructed an inhaler on the "Clover" type. Two Clover inhalers are in fact superimposed, with an air-way right through and an indicator at each end. There are two chambers in the main cylinder. The upper is the larger and will hold two fluid ounces (of ether). The lower smaller chamber will hold one and a half fluid ounces (of chloroform). The larger ether chamber is placed above on account of the denser vapour of this substance. Separate hollow glass-ended plugs are fitted to each chamber. A particular point in the apparatus is the central air-way which is double the calibre of that of the ordinary Clover inhaler and allows ample passage for the strongest respiratory blasts, even when both indicators are turned well on and

the current of air is consequently much deviated. The indicators are attached to two tubes revolving in the central air-way and they act on identically the same principle with regard to the opening and shutting of the apertures to the chambers as do the same in a Clover's inhaler. The bag has a revolving metal collar in order that it may remain in a dependent position whatever be the position of the upper (ether) indicator. The mask is of celluloid with a detachable indiarubber cushion. The whole apparatus is necessarily rather larger and heavier than a Clover's inhaler, but when used without the bag, as it should always be when chloroform is given, I have found it handy and compact. There are well-marked divisions on the cylinder opposite the pointers and the words "chloroform" and "ether" are plainly marked on their respective chambers so that there may be no mistake as to which anæsthetic is being given. The instrument has now been used a considerable number of times and personally I have found it particularly useful in abdominal cases and in those cases in which mixtures of ether and chloroform are especially suitable.

The method of administration that I employ in most cases is as follows. First the bag is entirely removed and chloroform given for the initial respirations by slowly turning on the lower indicator until Mark 1 is reached and the patient is beginning to lose consciousness. I then continue with ether until Mark 2 is reached by the upper indicator. In this way a quiet anæsthesia is induced without the unpleasant sensations produced by ether. The administration can then be

continued in the same proportion or in any proportion the anæsthetist desires, or chloroform can be shut off entirely and ether given alone with the bag on or chloroform given alone without the bag. Ether, it will be found, evaporates four or five times as fast as chloroform with the proportion E_2C_1 being used as measured by the indicators. The following are some results showing this:—

Sex.	Age.	Part operated on.	Time under anæsthetic (minutes).	Proportions by indicator.	Quantities actually used.	
					Ether (drachms).	Chloroform (drachms).
F.	44	Breast.	55	E. 2; C. 1.	28	6
F.	46	Umbilical hernia.	47	E. 2; C. 1.	28	4
F.	30	Gall-bladder (bronchitic patient).	60	E. 1; C. 2½.	20	11

I have found that the initial stages of anæsthesia are somewhat prolonged, seven or eight minutes being the usual time to get patients well under, this being due to a tendency to somnolence. Struggling is, however, much reduced. The colour remains very good, the cyanosis of ether being rendered impossible by the free air passage, while the mixture of the two anæsthetics counteracts the pallor produced by chloroform alone. Other advantages are those attendant on the administration of mixtures. I have not yet given chloroform alone by this apparatus but consider it would be safe to do so if no bag were used, the free air-way giving plenty of oxygen. It may be remarked that the respective vaporisations of ether and chloroform vary so at different temperatures that the indicators are of little value whereby to judge the proportions actually being given. The temperature of operating rooms and theatres is, however, nearly always between 65° and 70° F. A little practice will quickly demonstrate the rapidity of evaporation when refilling has to be done and the water-chamber fitted to the ether compartment will help to regulate the vaporisation of the ether.

The instrument has been made for me by Messrs. Down Bros. who have executed the work exceedingly well.

F. VICTOR MILWARD, M.B., B.C. Cantab., F.R.C.S. Eng.
Birmingham.

LITHOTOMY STRAPS.

THESE straps are made of stout webbing and are in three parts. The knee-straps are fixed round the flexed knees, the end of each strap, on which is a buckle, taking its attachment from the outer side of the knee. The long straight strap which in Clover's and similar crutches or straps passes

round the patient under one shoulder and over the other is in these straps made extra long to allow of its being passed round the head of the table instead of round the patient. By this means, the table being considerably wider than the patient's body, which is really comparatively narrow, the knees, on the long strap being buckled to the knee-straps and tightened, are drawn backwards and strongly outwards, the separation approximating in extent to the width of the table. The advantages of these straps are: (1) the wide separation of the flexed legs and thighs; and (2) the portability and lightness. They are packed in a soft case weighing less than nine ounces and measuring eight by two and a half by two and a half inches and are made by Messrs. Mayer and Meltzer of 71, Great Portland-street, London, W.

Plymouth. C. HAMILTON WHITEFORD.

Looking Back.

FROM

THE LANCET, *SATURDAY, JUNE 19*, 1824.

Foreign Department.

ROYAL ACADEMY OF MEDICINE AT PARIS.

(*Sitting of the 23d. of March.*)

M. ITARD read a paper on the spontaneous development of the prussic acid in the alvine evacuations. He quoted two cases of this kind. The subject of the first case had an inflammation of the intestines, the other presented symptoms of inflammation of the liver. In both the individuals, the stools smelt strongly of bitter almonds. M. ITARD regards these facts as important in a medico-legal point of view, and concludes from them, that the existence merely of the smell of prussic acid in the fæces should not lead one believe that the person had been poisoned with this medicine. M. DELENS related on this occasion several facts, which shewed that prussic acid had been found in the perspiration, urine, and expectoration, accounting for the blue colour of these liquids.

Mr. DUPUY observed, that cows fed in certain pastures gave blue milk. M. VIREY quoted a case where cows fed with the *prunus padus*, exhaled a very strong smell of bitter almonds. The existence of prussic acid in the excrements of these animals was ascertained by the existence of the sulphate of iron. M. MARC related, that in Germany some persons had been poisoned by eating sausages, in all of whom a great quantity of prussic acid was spontaneously developed.—*Archives Generales.*

A NEW MODE OF OPERATING FOR STONE ADOPTED BY M. DUPUYTREN.

M. DUPUYTREN has just performed the operation for stone in a new mode, and with the aid of a new instrument. The operation may be called the transverse operation (*taille transversale*), and the instrument, the double *lithotome caché*, which consists of two blades, arranged so as to cut at the same time, both right and left in withdrawing the instrument from the bladder. The catheter is introduced, and the membranous portion of the urethra cut to allow the introduction of the *lithotome* into the bladder. On withdrawing the instrument it is opened, by which means it divides the prostate on each side into halves the one anterior, and the other posterior. By this method, the vasa deferentia, rectum, transverse arteries of the perineum, and the pudic is avoided in the operation. M. DUPUYTREN operated a few days ago on a child; since which no bad symptoms whatever has appeared.—*Archives Generales, May.*

J. K. STARLEY MEMORIAL FUND.—A fund has been started with the object of commemorating the work of the late Mr. J. K. Starley who in 1885 introduced to public notice the safety type of the bicycle. The form and extent of the memorial will necessarily depend upon the total sum received, but it is the intention of the committee of the fund to associate it with the pastime of cycling and to make it of general value to the great community of cyclists. Subscriptions and offers of assistance should be sent to Mr. J. C. Parkinson, honorary treasurer, or Mr. R. T. Lang, secretary, at 27, Chancery-lane, W.C. Cheques and postal orders should be made payable to the "J. K. Starley Memorial Fund" and crossed "London and Westminster Bank (Temple Bar Branch)."

THE LANCET.

LONDON: SATURDAY, JUNE 21, 1902.

The Election of Members of Council of the Royal College of Surgeons of England.

ON Thursday, July 3rd, the Fellows of the Royal College of Surgeons of England will proceed to the election of four members of the Council. These four members will form a sixth part of the whole of that body and therefore will have no small effect on the results of its deliberations. It behoves, therefore, all Fellows earnestly to take into consideration their duties with regard to this election. From their position as Fellows they have the right of voting for four of the candidates for these vacancies and their duty to the College requires that they should exercise this right with care. There can be no excuse for failing to vote, for under the present rules a voting paper is sent unasked to every Fellow in the United Kingdom of Great Britain and Ireland and the voting can be done without trouble or effort. Formerly, indeed, it was not so, and every Fellow who wished to vote had to journey to Lincoln's Inn-fields and personally to record his vote. This was by no means easy even for Fellows living in London and for the vast majority of Fellows living in the country it was practically an utter impossibility. So much, then, having been done to facilitate the voting of the Fellows it is their duty to avail themselves of their privilege and to vote. The numbers voting have indeed increased since these alterations were made, but even now only about half of the Fellows care to exercise the power of voting which they possess. This harmful apathy is mainly responsible for all the evils from which the Royal College of Surgeons of England suffers. Under the present constitution the Fellows of the College can only influence the action of the Council, the *de facto* governing body of the College, by care in the election of members of the Council. The entire *personnel* of the Council can be changed in eight years, for every year one-eighth of its members retire by rotation. The reforms needed by the College could, therefore, be effected within a very short time were all the Fellows actuated by a sincere desire to advance the best interests of the College by the recognition of the claims of the Members and by electing to the Council only those Fellows who sympathise with the desire of the Members to have a share in the government of the College of which they form so important and so essential a part.

In the selection of candidates for whom to vote many Fellows experience great difficulty. It is not customary for the candidates for the vacancies on the Council to give any public expression of their opinions to the constituency and there is much to be said in favour of this practice; but the electors are left without any guide as to the views held by the candidates on the vexed questions of College politics. Frequently, therefore, the elector has to rely on the general surgical eminence of the candidate as a guide to his suitability to direct the affairs of the College. The general principles on which the posts on the Council should be distributed may be laid down as follows. There are 24 seats on the Council and of these four or five seats may be reasonably considered as belonging to provincial Fellows, and this is about the number of provincial Fellows usually on the Council. The 19 or 20 remaining seats must be divided amongst the 12 London medical schools. If possible every school should be represented and the number of representatives from each school should bear some relation to the relative importance of the school. On the present occasion for the four vacancies which exist there are eight candidates. Of the three members who retire by rotation one only, Mr. HOWARD MARSH, seeks re-election. It is a good rule that if a member of Council has served his term with credit to himself and benefit to the College he should be re-elected. Mr. HOWARD MARSH was first elected to the Council in 1892, but as he was then a "substitute" member his term of office came to an end in 1894, when he was re-elected for the full term of eight years. Mr. MARSH has done good work on the Council and we consider it highly desirable that he should be re-elected. The other candidates are, in order of seniority, Mr. JOHN HAMMOND MORGAN of Charing Cross Hospital, Mr. HENRY HUGH CLUTTON of St. Thomas's Hospital, Sir WILLIAM HENRY BENNETT of St. George's Hospital, Mr. CLINTON THOMAS DENT, also of St. George's Hospital, Mr. CHARLES WILLIAM MANSELL MOULLIN of the London Hospital, Mr. GEORGE JORDAN LLOYD of Birmingham, and Mr. JOHN BLAND-SUTTON of the Middlesex Hospital.

To consider these in order. Mr. MORGAN is connected with Charing Cross Hospital, one of the most progressive of the smaller medical schools of London and at present without a representative on the Council. Of Mr. MORGAN'S fitness for the post no more need be said than this—all who know him must recognise his suitability for the membership of the Council. Moreover, we consider that Charing Cross Hospital deserves a representative. Mr. CLUTTON is the senior surgeon of St. Thomas's Hospital. He is a good administrator and possessed of great energy and he would undoubtedly prove a most valuable acquisition to the Council. Moreover, by the death of Sir WILLIAM MAC CORMAC St. Thomas's Hospital has been deprived of its only representative and it would be surely very anomalous that so large and so important a medical school should have no representative on the Council. St. George's Hospital provides two sound candidates—Sir W. H. BENNETT and Mr. CLINTON DENT. This medical school is at present represented by Mr. PICKERING PICK and may not unreasonably expect to have a second representative on the Council. Mr. MANSELL MOULLIN is surgeon to the London Hospital and the author of several well-known works on surgical subjects. The London Hospital at present has one member on the Council, Sir FREDERICK TREVES. Mr. JORDAN LLOYD is the only provincial Fellow who is coming forward and since one of the vacancies results from the retirement of Mr. J. HARDIE, a provincial Fellow, it would only be reasonable that Mr.

JORDAN LLOYD should be elected. He will without doubt receive much support from provincial Fellows and we shall not be surprised if he is returned. Mr. BLAND-SUTTON is the last candidate whom we have to consider. He is attached to the Middlesex Hospital, which has already two such able representatives as Mr. HENRY MORRIS and Mr. PEARCE GOULD, and we cannot think it desirable that a third representative should be added.

Our consideration of the claims of all the candidates leads us to the conclusion that the most suitable choice the electors could make would be Mr. HOWARD MARSH, Mr. MORGAN, Mr. CLUTTON, and Mr. JORDAN LLOYD.

Insanity and the Death Penalty.

THE trial of a man named SIMMONS, who was indicted for murder at the recent assizes at Dorchester, affords an example of the change which has taken place during the past 50 or 60 years in the attitude of the criminal law towards those mentally affected. The prisoner had committed his crime in the light of day, going into a public-house close to the club at which he was employed as steward and shooting his victim, a barmaid, with a revolver in the presence of several witnesses. There was evidence that he had given her presents, but if he had made other amatory advances to her there was nothing to show that he had been successful. Two days before the commission of the crime he had made accusations of intemperance and dishonesty against her to her employer which, if believed, would have insured her dismissal. Her employer, however, had refused to listen to his story. He had then purchased a revolver and two knives. With the revolver he shot her fatally and tried immediately afterwards to kill himself. Before shooting his victim he withdrew what was for him a considerable sum of money from the bank and in the bar he made some observation or proposal to her which was inaudible. Her reply, however, was given in evidence and was to the effect that she would have nothing more to say to him and the death-shot followed immediately.

It will be seen from the above brief account that the crime was on the face of it more or less deliberate; it was committed by an angry man upon a woman who had refused apparently to respond to his passion. Those concerned for the defence, however, were able to trace with considerable minuteness the history of the prisoner's childhood, youth, and early manhood. This history, with the narrative of the crime itself, had been laid before Dr. L. A. WEATHERLY of Bailbrook House, Bath, and Dr. W. B. MORTON of Brislington House Asylum, Bristol, with the result that these two gentlemen gave evidence in the witness box to the effect that at the time when the prisoner committed the crime he had not a full appreciation of the nature and quality of his act. Both expert witnesses agreed that he was at the time of the crime, and had been for long, suffering from the effects of "minor epilepsy." In the end, after a very brief consultation together, the jury found that the murder was committed by the prisoner but that he was insane, and Mr. Justice BUCKNILL, after expressing his concurrence with this finding, ordered him to be detained until His Majesty's pleasure should be known. Such a result to a trial based upon such facts would hardly have been possible in the days of the fathers of the present generation. In 1843, when DANIEL MCNAUGHTON murdered Mr. DRUMMOND, apparently mistaking him for Sir ROBERT PEEL whose secretary he was, evidence was given by medical witnesses and others on behalf of the prisoner which clearly showed that he was insane in the broadest and most popular sense of the term, suffering as he was from delusions which prompted him to fire the fatal shot under a sense of injury and to redress imaginary wrongs. Upon this evidence, and in the absence of any rebutting evidence, Chief Justice TINDAL stopped the case and directed the jury to find a verdict to the effect that when the prisoner did the act, which he had undoubtedly committed, he was not of sound mind. After this the House of Lords met to consider the question of how far insanity was to be held to exonerate a criminal from the consequences of his act and took the advice of the judges thereon. It was then laid down by the judges of the day, in answer to questions placed before them, that to establish a defence on the ground of insanity it must be clearly proved that at the time of the committing of the act the party accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or that, if he did know it, he did not know that he was doing what was wrong. It was further declared upon this occasion that an accused person proved to be suffering from a delusion supplying a motive for his crime must be considered in the same situation as to responsibility as if the facts with respect to which the delusion existed were real. That is to say, that a man might be held irresponsible who killed another under the delusion that he was defending his own life from a murderous assailant, but must not be so excused if he took life merely because he was under the delusion that his victim had done some great injury to his character. In the case of the murder referred to above the law, as it was laid down in MCNAUGHTON'S case, if strictly applied, would hardly have excused the prisoner, of whom Dr. WEATHERLY expressed the opinion that when he did the act "he was overwhelmed with morbid delusive fears," and as to whose mental condition Dr. MORTON'S view was that "at the time he committed the crime he had not a full appreciation of the nature and quality of the act."

As far as we are aware, no decision enunciated by any court to which appeal has been made has varied the law as laid down for the guidance of judges in MCNAUGHTON'S case, but the development of medical and psychological knowledge and the tendency towards mercy natural to advancing civilisation and a milder age have modified the summing up of judges and the verdicts of jurymen. The result of this is that where it appears that a murderer acted under a delusion or under an impulse which a reasonable man would have controlled, whereas in his case there was an absence of self-control owing to mental infirmity, he may now escape the capital penalty which would formerly have been meted out to him. Of such conditions as these the case we have commented on appears to be a noteworthy example, but if there is trustworthy evidence of unsoundness of mind upon which a jury may act it is clearly only merciful and just that the person so afflicted should not be executed as a criminal.

Coronation Rejoicings and Fire.

THE recent fire in Queen Victoria-street and the terrible loss of life which accompanied it have called attention, as attention has been called before, to our Metropolitan Fire Brigade system and particularly to the means for rapidly summoning the assistance of the fire brigade and to the appliances provided by the brigade for enabling persons to escape from burning buildings. We are now expecting in the near future the coronation of King EDWARD VII. and his beloved QUEEN and one of the modes of celebrating it is to consist in illuminations on a scale never before attempted in London, while at the same time enormous crowds will hinder the operations of the fire brigade should any necessity for them arise, and in many miles of thoroughfare temporary stands of a highly inflammable character will be a grave source of anxiety and danger should any fire take place in their neighbourhood. In these circumstances it will be the duty of everyone who seeks to exhibit loyalty by illuminating his house or windows to act with extreme care and with consideration for possible danger to his neighbours and to himself.

With regard to illuminations in which electric light is used there can be little fear of conflagration; there is no naked flame to come in contact with other decorations, and the probability of serious accident arising through short-circuiting is not great. In the case of gas jets there is often a naked flame which may come in contact with a flag or with unprotected woodwork, but care will prevent this and a fire so occasioned will be, as a rule, outside and not inside a substantially built house. Illuminations, however, in which gas or electricity play a part are usually exhibited by the wealthier classes and are erected by skilled workmen. It is in the display of what we may call "amateur" illuminations that danger of accidents will lie, and where accidents take place there will always be a possibility of serious results owing to the fact that the inhabitants of many of the houses will be out in the streets and that the crowd and confusion will hinder the movements of those who otherwise might render assistance. These amateur decorations will consist chiefly of lights contained in coloured glass receptacles or Japanese lanterns, and once safely lighted and placed outside the house there is no great danger even in these. The dangers that may arise are likely to occur in lighting them; this should be done by a responsible person and if it is done inside the house caution should be exercised lest window curtains and other inflammable substances may come near them. In all cases where exposed lights are used attention should be paid to the possibility of window curtains coming in contact with them outside the house—that is to say, all windows behind illuminations are best closed. With Japanese lanterns, which are always liable to catch fire, and the glass receptacles referred to, if these are suspended, wire of serviceable stoutness should be used and never string. Any makeshift devices, such as have been suggested at times on such occasions by foolish persons, consisting in placing candles or lamps close to windows inside the house, should be avoided even though they are prompted by the loyalty of persons too poor to afford more elaborate exhibitions.

There is one form of rejoicing akin to illumination which should be absolutely forbidden, and that is the letting off of fireworks of any kind, either in the streets or from houses. At the time of popular rejoicing over the relief of Ladysmith and of Mafeking in some parts of London rockets were let off from house-tops with absolute disregard as to where the rocket-sticks might fall, and we do not know that any police-court proceedings followed. Indeed, in one case of which we are aware inquiry at a police-station had as its result the reply that the police were powerless to interfere as long as fireworks were let off from private premises—that is to say, that a man might discharge a succession of rockets from his house-top over, or into, the crowd in the streets, the houses of his neighbours, their vehicles, and their horses, and the police could not do anything to stop him or to have him punished. If this attitude of the police is correct we can only congratulate London that popular rejoicing does not take the form of the discharge of firearms and that rockets are used and not "pom-poms." Fireworks of any kinds are dangerous in careless hands and near buildings. The smallest, such as squibs and crackers, let off in a street may injure eyesight or cause a temporary rush or panic in a crowd. A rocket does not always descend in the form of a stick; it sometimes fails to rise, but whether it comes down as a blazing firebrand or a smouldering lath it may go through a window and set fire to a house, it may frighten a horse, or it may hurt a human being. A rocket-stick, even if quite extinct, falling among the upturned faces of a crowd might do serious damage. Whatever means, however, are taken by the police to forbid imprudence or to supervise the safety of London during the nights succeeding the coronation the real safety of London will have to lie in the prudence and good sense of individuals, and it will be the duty of all who have influence with the careless and irresponsible to use it to the utmost. Any accident connected with fire commencing at such a time might have terrible results that on an ordinary night might not occur, while the illuminations that are to take place next week promise to be practically universal and the crowds prodigious.

Annotations.

"Ne quid nimis."

THE PSYCHOLOGY OF JUBILATION.

"MY masters, are you mad, or what are you?" was the question asked by Malvolio, and on several occasions during the last two years he might have put the same query. As a nation, and perhaps even individually, we are more sober in adversity than in success, certainly we are much more dignified in the dogged acceptance of conditions that have gone against us than in the exuberant manifestations of an accomplished victory. Why should the burning of gas, for example, the making of noise by gun-firing, bell-ringing and shouting, feather-tickling and squirting be the outward signs of joy? Partly because they are the local signs of a desire for the general diffusion of what is agreeable individually (does anyone, however, like to be squirted at?), partly because they are the means for an actual physical restoration of balance by the provision of an outlet for pent-up explosiveness. Of course, such exuberance

is an insanity of the moment. When it is over we make excuses for having been so demonstrative, we look sheepfaced when brought to reflection on the temporary aberration, but we are able to settle down to prosaic existence much more quickly than would have been possible if we had fought against the volcanic explosion of feeling and had endeavoured to cool ourselves down by more gradual and rational methods. In these public outbursts of enthusiasm it is the night-time which sees the culmination of seismic social disturbance, because inhibition is then at its lowest ebb. The light of day has gone, we must have more light, so we flout the quiet heavens with artificial fire. The silence of night is oppressive, we must have a soothing noise. Shout, then; laugh and sing, until the larva of jubilation has run out and we can rest, lapped in the peace that follows an irresistible letting-go. So might argue, if arguing it can be called, the crowds filling our streets upon Mafeking nights and Peace nights, and the affinity of this frame of mind to madness must strike observant men. The essential difference between the madness of the man inside the asylum and the insanity of the man outside is that the former has his failure of inhibition at times when there is no excuse for it except his own personal morbid condition, when, therefore, the rest of society is unprepared and resents the forcible exhibition of what is against its feeling of the moment. The latter's outburst exactly represents that feeling and the sanity of what is really a manifestation of insanity is accepted by all. Are these ebullitions good for the community? We think that they are, though we feel that this is tantamount to confessing that the march of civilisation has not modified human nature so much as might be believed. The world is very much as it was long ago. There is still the same tendency to explosiveness, to mind-storms, to loss of inhibition, and it takes very little to seduce the sedate citizen into the destructiveness of the child, the "rag" of the university student, or the hooliganism of the man of the street. Habit may do much. Events of the last three years have been of the nature of a new experience; there was no preparation, no gradual adaptation to new conditions, while everything that argued for explosiveness was provided. But perhaps we are now more acclimatised. We have had time to prepare for the Coronation and we shall probably display less convulsive and hysterical jubilation than we should have done had the occasion been suddenly sprung upon us.

THE CIVIL SURGEONS AND THE LATE WAR.

THE civilians who took part in the South African campaign have returned, or are returning, to their usual avocations with a store of new experiences which cannot fail to be of value to them, whatever their calling in life. Some will have more opportunity than others of turning to account the practical lessons that they have learned, but all our volunteer and auxiliary forces are coming back to civilian life with their views broadened, their knowledge of men and matters immensely enlarged, and their qualities of endurance and self-reliance tried in the fire of experience. With regard to the civil surgeons now resuming their peaceful callings we wish to call attention to a suggestion made by Surgeon-General A. H. Keogh, C.B., the Deputy Director-General of the Army Medical Service, at the dinner of the South African civil surgeons last week. Surgeon-General Keogh thought that civil surgeons who have seen service in South Africa might well organise themselves into field hospital units in times of peace, and the idea is, in our opinion, a thoroughly valuable one. One of the most striking episodes in connexion with the war was the promptitude, nay eagerness, with which a large number of medical men voluntarily offered themselves for active service, in many cases giving up lucrative civilian positions, regardless of the fact that they might be sacrificing their lives as well as their professional prospects. Undoubtedly the Army Medical Service was at the time that the war broke out seriously undermanned. The country really stood in need of the help of civilian medical volunteers and this fact was, not too quickly or too gracefully, recognised by the War Office. At once all possible vacancies were filled. These volunteers have discharged their duties admirably and while doing so have got into touch with their military colleagues in a manner that certainly ought to be made available for future use. The union now made should be cemented. The civil surgeons have seen the work of the officers of the Royal Army Medical Corps in the field, they have taken part in their duties, and they now know the peculiar difficulties which the medical military officer has to encounter. For the future, whenever the civilian medical man can help his colleague of the Army Medical Service he may be trusted to do so. To return, however, to Surgeon-General Keogh's suggestion. Willing as the civil surgeon showed himself to help his brother in the army, the services which he rendered, valuable and effective as they were and rightly as they earned the praise of the authorities, would often have been enhanced by a knowledge of army routine and an appreciation of military discipline. Supplementary help to our armies in time of war must always be more effective if organised in time of peace and under the direction of, or at any rate in some degree in touch with, the military authorities. The suggestion made by Surgeon-General Keogh to the effect that civil surgeons who have seen service in South Africa should organise themselves into field hospital units rather than attach themselves to volunteer regiments is one that should be acted upon promptly, we consider, if the lessons of the war so far as they affect the civil surgeon are not to be largely lost. In the late campaign the field hospital proved itself to be a unit of the greatest importance. We have, however, no field hospitals maintained in time of peace and the question how such hospitals are to be organised is a matter for consideration. The first thing to be done is for the civil surgeons to signify their willingness to form themselves into such an auxiliary branch of the service and then to draw up a working scheme. We know that there are difficulties in the way of such a scheme, but they are not insurmountable, and as far as the matter of equipment is concerned we do not anticipate financial difficulties. That the Director-General of the Army Medical Service would welcome such a scheme there can be no doubt, and we trust that before long the field hospital in time of peace will have become an established institution.

FREE LIBRARIES FOR THE BLIND.

THERE is a feeling at once natural, general, and laudable which leads men and women at a time of national rejoicing to seek out and to help proper objects of charity. The feeling arises, no doubt, from that sympathy with his fellow-men which dwells to a greater or a less extent in every human breast. It is the same feeling, dependent upon the same sympathy, which makes a man laugh more readily when others can laugh with him and which draws tears to a woman's eye when she sees other women weep. At the present moment when thousands of happy men and women in England are preparing an extra happiness for themselves in the acclamation of a well-beloved Sovereign some such sympathy spreads far and wide. Every man who rejoices feels that he would do something to help those to whom joy comes less easily, if at all. In this way such times as these of coronation celebrations are a double blessing. The happy rejoice and the unhappy—the poor, the sick, the blind—have

at least some alleviation shed upon their misery. With reference to the last-named class of sufferers—the blind—we wish to draw the attention of our readers to the Home Teaching Society for the Blind, a society whose benevolent efforts, successful though they are in adding pleasure to the scant enjoyment of hundreds of the poor blind, might be still more so but for the need of funds. A letter from the president of the society, Viscount Midleton, appears in the *Times* of June 16th and contains this sentence: "Want of money alone limits the extent of its work." As the letter points out, the Home Teaching Society has a centre for exchange as well as a complete organisation for free distribution of books. We cordially agree with the society's president in thinking that the philanthropic who wish to commemorate the Coronation in a special way in connexion with those who suffer from blindness will be better advised in aiding the established society than in seeking to found an additional free circulating library, and we can imagine no more suitable object for such specially directed charity than the Home Teaching Society for the Blind.

ANTECEDENTS AND TERMINATIONS OF EPILEPSY.

DR. WILLIAM SPRATLING, medical superintendent of the Craig Colony for Epileptics, New York, contributes an interesting article to the *Journal of the American Medical Association* of May 3rd on some points connected with the antecedents and terminations of epilepsy, information concerning which is not usually given in text-books. The article is based upon observations made during several years at the Craig Colony for Epileptics, an institution offering exceptional opportunities for the study of the disease in its various aspects. In the United States, says Dr. Spratling, one person in every 500 of the population suffers from epilepsy, a ratio which is about the same as that prevailing in England. From a study of 1100 cases during the past six years in regard to etiology it appeared that in 15 per cent. of males and 17 per cent. of females epilepsy existed in and was inherited from the parents (similar heredity). Among other important causes alcoholism was present among the parents in 16 per cent. of males and 12 per cent. of females, insanity in the immediate ancestors was met with in 7 per cent. of males and 10 per cent. of females, while parental tuberculosis was found in 15 per cent. of males and 12 per cent. of females. Taking the chief hereditary factors above mentioned it was found that they could be traced in 56 per cent. of the entire number of cases observed. Cerebral palsies sustained during childhood were recognised as the cause in 117 cases, or 11 per cent. of the total cases, while head-injury during birth or childhood accounted for a few more. The fevers and infections of childhood—measles, scarlet fever, diphtheria, and obscure forms of intestinal disease—probably assisted in the production of epilepsy in some cases but no exact conclusions could be reached regarding their etiological value. Epilepsy arising from hereditary sources almost invariably manifested itself during childhood, puberty, or early adolescence, but when appearing for the first time after adolescence it was probably due to syphilis, traumatism, or some form of toxæmia such as resulted from alcohol, absinthe, or lead poisoning. Epilepsy tended to shorten life, the greatest danger being the occurrence of the status epilepticus, a condition which was likely to develop in any form of epilepsy at any time and which was the cause of death in 25 per cent. of all deaths among epileptics. Epileptics were unusually prone to disease of the heart and lungs. Thus of the deaths in Craig Colony during six years 24 per cent. were due to pulmonary phthisis, 10 per cent. to organic disease of the heart, and 8 per cent. to pneumonia. Under proper treatment—i.e., under conditions which enabled the physician to control absolutely the habits of the patients—from 8 to 10 per cent. of epileptics, if taken in time and treated long enough, might be made to recover. The most discouraging symptom was mental enfeeblement or dementia which affected fully 90 per cent. of all cases of epilepsy when the disease had been in existence some years. Treatment comprised the giving of bromides and a simultaneous withdrawal of all sodium chloride from the patient's food (salt starvation). The sedative action of the bromides was thus enhanced—almost doubled. The addition of opium (Flechsig) or of adonis vernalis (Bechterew) facilitated recovery in some cases. Epileptics should be promptly treated in case of constipation with aperients, and beta-naphthol or salol in five-grain doses should be given with the aperient. Status epilepticus should be treated with a mixture of chloral, opium, and bromides. The diet of epileptics should be always plain and unseasoned—e.g., milk, eggs, rice and cereals, and fruit. Meat or fish should be taken sparingly at noon and the evening meal should always be light.

INDUSTRIAL DANGERS IN THE TRANSVAAL.

DR. THOMAS OLIVER, one of the physicians to the Royal Infirmary, Newcastle-upon-Tyne, sends us an interesting communication on this subject which we have had pleasure in reproducing in our columns.[1] Dr. Oliver speaks with authority on industrial dangers. He is the confidential adviser of the British Government on these matters and has recently published[2] the best English work of recent years on this important branch of State Medicine. It appears that many of our north-country colliers who had previously emigrated to South Africa in search of lucrative employment have during the last two years returned to their homes in Northumberland and Durham owing to the closing of the South African mines and the continuance of the war. These miners, we are told, present the appearance of men broken down in health who sooner or later succumb to pulmonary disease—they return to their homes in this country "only to die of phthisis." As Dr. Oliver has in the course of his out-patient practice become familiar with the form of disease presented by the Transvaal miners, he has been at considerable pains to write a very useful description of the symptoms and physical signs of the malady as it occurs among these workers and has suggested rational principles for its prevention. He has done this public service with a view, if possible, of inducing those in authority to bring about improved and more sanitary methods of mining in the Transvaal, as well as of advocating the necessity for revising the mining regulations of that recent addition to the British Empire with a view to the saving of life and the promotion of health among the miners. To those who are especially interested in this question no better text-book could be recommended than that which Dr. Oliver himself has provided in his recently-published Treatise on Dangerous Trades, which embodies several contributions by eminent authorities at the Home Office and elsewhere in England and Scotland. In particular we would refer to the chapter on the Regulation of Injurious or Dangerous Occupations in Some of the Chief European Countries, and also to the section on the Vital Statistics of Miners and Others Engaged in Dust-producing Occupations, which forms an important part of the earlier pages. It is, of course, true that in Great Britain there is no industry precisely analogous to the gold mining of the Transvaal and therefore that the experience of this country cannot supply complete instruction as to the best methods by which the health and life of gold

[1] THE LANCET, June 14th, 1902, p. 1677.
[2] Dangerous Trades, by Thomas Oliver, M.D. Glasg., F.R.C.P. Lond. London: John Murray. 1902.

miners may be safeguarded; nevertheless, Dr. Oliver tells us that gold mining is, *inter alia*, a dust-producing occupation—that "gold miners' disease" is essentially a slowly-developing pneumoconiosis due to the inhalation of dust; it is therefore a malady akin to stonemasons' or steel grinders' phthisis. In using the term "phthisis" to describe this particular malady we are pleased to note that Dr. Oliver is careful to distinguish miners' phthisis from the tuberculous infection to which, unfortunately, the same name is still indiscriminately applied, even here in England. In the miners' phthisis of gold workers there are few of the well-known signs of the tuberculous malady. Hæmoptysis, for example, although it sometimes occurs, cannot be said to be a symptom of the disease. There is no night-sweating; it is essentially an afebrile disease, and until towards the approach of death there is no rise of temperature, and even then it may not be very marked. In all these respects, and also in regard to the physical signs which accompany it, gold miners' phthisis contrasts strongly with pulmonary tuberculosis and shows a striking similarity to the fibroid lung disease or pneumoconiosis of this country. On the question of treatment Dr. Oliver has few suggestions to offer. If any good at all is to be got by treatment he thinks that this can only be attained by the gold miners renouncing their work in the very earliest stages of the illness and following outdoor employments. He is, however, of opinion that until a larger experience of the disease has been gained it would be better to send the patients for change of air, not to the seaside but inland to fairly high altitudes—say, 700 feet or more above sea level. It is therefore mainly to preventive science that we must look for a reduction of the evils which South African miners suffer as a consequence of their avocation, and Dr. Oliver's thoughtful essay will not have been written in vain if it awakens in the right quarter the conviction that something in the direction of prevention is practicable and therefore ought to be attempted forthwith.

DINNER OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

ON June 13th, following the delivery of the Bowman Lecture by Professor Fuchs of Vienna, the above society celebrated its majority by a dinner at the Trocadéro, Piccadilly, the members and guests numbering nearly 100. In the absence of the President, Dr. David Little, through illness, the chair was worthily filled by Dr. D. Argyll Robertson of Edinburgh. The Royal Toast having been honoured Dr. W. H. Allchin, President of the Medical Society of London, proposed "The Welfare and Prosperity of the Ophthalmological Society." Specialism, he said, had come to stay, and ophthalmology more particularly justified itself owing to the time necessarily devoted to special study and technique. Before the establishment of that society ophthalmic subjects and cases were brought before the Medical Society of London and he cited some remarkable instances of the heroic treatment adopted in former days. He observed that during the past 10 years no communications on ophthalmic subjects had been received by it. Many Fellows of the Medical Society of London were original members of the Ophthalmological Society of the United Kingdom, the comprehensive title of which, as well as the eminence and number of its members, some of whom were present from India and the Colonies, testified to its extent and prosperity. Sir Anderson Critchett, who proposed in graceful terms "The Health of the Bowman Lecturer," said that it was as difficult to praise a friend before his face as it was to disparage an adversary behind his back. Professor Fuchs was known as the writer of the most popular work on ophthalmology in the whole world, as well as a most successful teacher and practitioner. He was worthily numbered among the pre-eminent men in medicine whom Vienna had produced. Professor Fuchs, in reply, referred to a statement that "hospitality was most developed in primitive countries and disappeared with the progress of civilisation." England, maintaining its primitive hospitality, welcomed men who were sometimes driven from their own countries on account of advocating new ideas, and maintained her tradition of freedom in science as in government. In his younger days he had studied in London and was greatly indebted to Bowman and Critchett for their teaching and work. He congratulated Sir Anderson Critchett on having so well maintained the honour of a celebrated name. Mr. H. R. Swanzy (Dublin), who proposed "The Health of the Guests" in a speech at once witty and in good taste, congratulated the society on maintaining good fellowship among its members, and welcomed the guests, among whom he mentioned Sir William Church, Bart., President of the Royal College of Physicians of London; Dr. Landolt of Paris; Dr. Allchin; and Mr. H. W. Page, President of the Neurological Society. Sir William Church and Dr. Landolt replied, and after a tribute to the chairman and secretaries a most enjoyable entertainment was brought to a close.

THE APPROPRIATE FORM OF LENS FOR CONICAL CORNEA.

M. J. JANSSEN read a paper on this subject on May 5th before the Académie des Sciences, an abstract of which appears in the *Comptes Rendus* of May 20th. He proposes the use of a deep meniscus lens, the inner surface of which is concave to such an extent that it is approximately parallel to the convex surface of the conical cornea while the outer surface is convex to the extent of a normal cornea. Mention is made of only one case for which such lenses were made 10 years ago and succeeded in restoring sight almost to normal (*une vue très sensiblement normale*). It is obvious that the effective area of the meniscus must not measure more than half an inch from side to side, or the weight of these deep menisci would be intolerable. Further, such glasses would be exceedingly costly if the inner surface were made to correspond exactly with the conical cornea of each individual. Practically very deep concave plano-spherical lenses of known curvature might be kept in stock by opticians. On finding the biconcave trial lens which gives with a patient the best visual result it would be an easy matter to determine the requisite additional curvature that would have to be ground on the outer surface which would make the meniscus of the same strength as the trial lens. A lens made in this way should be more suitable for a conical cornea than the ordinary biconcave lens, while the cost of its manufacture would not be excessive.

AN OUTBREAK OF RABIES.

THE strong manner in which the Rabies Order was enforced and the Muzzling Order carried out in the face of so much bitter outcry and opposition on the part of the fanatical section of the dog-owning community has borne good fruit in England, but that it is still necessary not to relax any precautionary measure is shown by the fact that even within the past few days a case of rabies has been reported from Wales. The rabid animal was a Scotch collie belonging to a farmer in Pembrokeshire and it commenced its wanderings one Sunday evening. On the following Wednesday it was seen, and, unfortunately, ran amongst a lot of children who were coming out of school, biting one of them. Eventually it was shot, and a post-mortem examination, made by the county council veterinary inspector at Haverfordwest, revealed evidence of rabies, this being subsequently confirmed by inspectors sent from London by the Board of Agriculture. Unluckily, during the three days when the collie was away, its

wanderings spread over a large area and it is impossible at present to trace the exact amount of damage done. Several dogs are known to have been bitten and these have been destroyed. A sheep, one of a flock through which the dog was seen to pass, has died from rabies, and the probability is that many animals were bitten and may become mad. The seriousness of the affair has caused considerable excitement and comment in the district, the Muzzling Order has again been enforced, and it is to be hoped that the precautions taken will attain the desired result. The western district of Wales is the only one in Great Britain in which rabies exists or has recently existed, and when once this part can be declared free it is to be hoped that this dreaded disease will become as complete a stranger to our shores as rinderpest and other diseases which have been stamped out by the Board of Agriculture and its veterinary and administrative advisers.

LORD SALISBURY AND THE LONDON WATER BILL.

ON June 12th the Prime Minister received a deputation who attended to request him to use his influence to support the London Water Bill and to urge the claims of the metropolitan boroughs to receive adequate representation on the Water Board. The deputation included the mayor of the City of Westminster and the mayors of the boroughs of Chelsea, of Camberwell, of Hackney, of Holborn, of Islington, of Lewisham, of St. Pancras, and of Stepney, and representatives from the urban districts of Beckenham, of Chiswick, of Kingston, of Isleworth, of Surbiton, of Twickenham, and of Wimbledon. The awakening interest in the water-supply shown by some of the metropolitan civic authorities is a wholesome sign, but it is becoming manifest somewhat late, and even now a small proportion only of the metropolitan mayors seem to have been present as members of the deputation. Lord Salisbury did not appear to feel much enthusiasm for the Water Bill, nor did he take a particularly cheerful view of its prospects. A perfect scheme, he said, was unattainable and he agreed with the deputation that the "present form" of the Bill is the best that they could attain. The London County Council was convinced that it ought to have control over the water-supply—that was nothing against the London County Council. On the other hand, there was no reason why the deputation should not resist the Council in that matter. In fact, the fate of the Bill would largely depend on the efforts of the deputation.

PHYSICIANS AND THE FRENCH PRESS.

THE physicians of no nation in the world hold a higher standard of medical ethics than do those of France.[1] It is by no means so certain that the general public in France quite appreciate the high standard of medical etiquette which is observed by the leading members of the medical profession. One of the most popular of the Paris papers lately[2] contained a short article entitled "Hygiène et Médecine" in which the name and address were given of a medical man who is said to be an attractive writer and a well-known specialist. Three of this gentleman's recently published books are then lauded. Of the first of these ("La Peau et l'Estomac") it is said that it enables the reader to put his finger on the causes of maladies connected with these organs, gives the newest hygienic precautions to be adopted for avoiding them, and the most rational methods for their treatment. All this useful information may be had for one franc. The second book ("Consultations pour les Arthritiques") deals not only with rheumatic and gouty affections but gives advice also concerning diabetes and obesity as well as certain constitutional diatheses. This volume also costs one franc. The third book is rather more expensive—in fact it costs as much as the other two put together. It should be said, however, that the volume may be considered almost topical. "Inspired by the very suggestive title of M. de Brieux's play Dr. X has taken for his title 'Conseils aux Avariés' and has produced a popular work of undoubted usefulness." We cannot pretend that lay opinion in England is at all well informed on questions of medical etiquette and it was recently the duty of THE LANCET to make the matter clear on one or two points. At the present time it seems that French physicians have even more reason than we have to take exception to some of the writing in the lay press of their country, for it is inconceivable that an article like the one from which we have quoted would be printed in the columns of a leading London journal.

[1] Le Médecin dans la Société Contemporaine (Paris, Masson).
[2] Le Figaro, June 13th.

SULPHUR IN RAIN SHOWERS.

MORE than one observer in different parts of the country has volunteered the statement that the recent rains have left a deposit of sulphur on the earth and the conclusion has followed that this sulphur had its origin in the recent volcanic eruption in the West Indies. It is open to doubt whether the yellow deposit was due to sulphur at all, the probability being that it is the pollen of certain conifers. Assuming, however, that free sulphur was present its origin could not have been the dust showers of the West Indies eruption, for a recent analysis of the deposit collected from the deck of the steamer *Reddaw* shows no free sulphur at all, but chiefly the silicates of alumina, iron, calcium, and magnesia. The only sulphur found was present as sulphate, and then only to the extent of less than 1 per cent. The analysis, in short, shows that the dust possessed the composition of crude pumice.

THE MIDWIVES BILL.

ON Friday, June 13th, the Midwives Bill was read for a third time in the House of Commons after an interesting debate which will be found fully reported in our columns. The amendment by which a woman uncertified under the Act is not only prevented from assuming the title of midwife but is also prevented from practising the habitual rôle of midwife for gain received the approval of the House though Mr. Jesse Collings and Mr. Ritchie both spoke against it. Mr. Ritchie concluded the debate by defining his own position in the following terms: "I prefer the Bill as it was originally, but I very much prefer the Bill as it stands now to not having any Bill at all." After this statement it seems improbable that the Government will offer any resistance to the passage of the measure in the House of Lords.

THE NEW EXPEDITION OF THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

DURING the researches of the last expedition of the Liverpool School of Tropical Medicine which visited the Gambia in the summer and autumn of 1901 an important discovery was made with regard to the animal parasite trypanosoma. It was then discovered that the presence of this parasite in the blood is closely connected with disease in Europeans which had not previously been recognised. It is very similar to the blood parasite which is the cause of the disease among cattle and horses in Africa, India, and other tropical countries, known as the tsetse-fly disease. In the case of animals it has been proved that this disease is communicated through the agency of biting insects, such as the tsetse fly. The trypanosoma parasite was discovered in the blood of a native child. Since the return of the expedition the subject has been investigated at the laboratory of the Liverpool Tropical School and the committee of the school has

resolved to despatch a fresh expedition to the Gambia and to Senegambia to follow up the investigation. The new expedition will start next month and will consist of Dr. J. E. Dutton, the Walter Myers Fellow in the Liverpool School of Tropical Medicine, and Dr. J. L. Todd of McGill University, Montreal, who has been working for some time in connexion with the Liverpool school. Its principal object will be to investigate the conditions under which the disease occurs in both Europeans and natives and its distribution, and also to ascertain how it is conveyed from man to man, whether by a biting insect or by other means. Sir Alfred L. Jones, K.C.M.G., the chairman of the school, will kindly provide for the passages of the members of the expedition.

THE ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

THE committee of management of the Anatomical Society of Great Britain and Ireland has decided to hold the summer meeting at St. Bartholomew's Hospital Medical School, London, E.C., on Thursday and Friday, July 3rd and 4th, commencing each day at 3 P.M., under the presidency of Mr. C. B. Lockwood. The annual dinner of the society is arranged for Thursday, July 3rd, at the Café Royal, Regent-street, W., to commence at 7.30 P.M. Communications should be addressed to the honorary secretary, Dr. Peter Thompson, Middlesex Hospital, W.

THE VALUE OF BENEDIKT'S SYNDROME IN THE LOCALISATION OF LESIONS OF THE BRAIN.

SINCE Professor Benedikt of Vienna drew attention in 1889 to a group of symptoms, subsequently known as "Benedikt's syndrome," which occurred in lesions of the upper half of the cerebral peduncle, little has been recorded of this condition. Charcot, however, reported two cases in 1890 in which this group of symptoms was present and where the post-mortem findings confirmed the localisation of the lesion diagnosed during life. The symptoms which constitute Benedikt's syndrome are briefly a partial paralysis of the ocular muscles of one eye and a paresis of the opposite side of the body. In an article in the *Revue Neurologique* of May 15th last Dr. Leon d'Astros and Dr. E. Hawthorn have published a case illustrating the symptoms and diagnostic value of Benedikt's syndrome very clearly. The case was that of a child, aged 21 months, who was admitted to hospital in November, 1901, with oculo-motor paralysis of the right eye and paresis with involuntary movements of the left upper and lower limbs. The right eye remained closed sometimes for hours and could not at any time be fully opened. There were divergent strabismus and mydriasis of the pupil. There was also some spasmodic contracture of the left hand, including the thumb and fingers. The forearm remained in a state of semiflexion and pronation. The most salient feature, however, consisted of oscillations and rhythmic movements of the forearm which varied in amplitude and rapidity, occurring when the patient was awake and ceasing during sleep. The triceps tendon reflex was almost absent. The left leg lay extended and immobile with the toes semi-flexed but the foot showed rhythmic movements of extension of flexion. There was no Babinski symptom. The knee-jerks were exaggerated on both sides. Some degree of left-sided facial paralysis was present. The patient was anæmic and emaciated on admission and gradually grew worse and died on the nineteenth day. The necropsy showed a tuberculous tumour in the upper half of the cerebral peduncle, situated mainly to the right of the middle line. It was embedded in nerve-tissue and came nowhere into contact with the pia mater. Inferiorly it reached to within two millimetres of the upper border of the pons, and superiorly it extended to the ependyma of the third ventricle and involved the substantia nigra and subthalamic tissues. It measured 17 millimetres vertically and 16 millimetres transversely. Dorsally it reached as far as the iter and implicated the oculo-motor nucleus but spared the corpora quadrigemina. The clinical symptoms during life were so characteristic that diagnosis was made of a tumour in the above situation which the necropsy confirmed. A tumour in such a situation is beyond the reach of surgical operation, but the writers have shown that Benedikt's syndrome has a distinct diagnostic value.

THE PREVALENCE OF SMALL-POX.

THE figures showing the number of patients admitted to the hospitals of the Metropolitan Asylums Board for the past week are as follows:—On Saturday, June 14th, there were 18 fresh cases; on Sunday, the 15th, there were seven fresh cases; on Monday, the 16th, there were 12 fresh cases; on Tuesday, the 17th, there were 20 fresh cases; and on Wednesday, the 18th, there were eight fresh cases. In the county of Essex for the week ending June 14th there were notified 22 fresh cases, while throughout Scotland from June 1st to June 15th there were notified 41 fresh cases.

THE BREAD-SUPPLY OF JOHANNESBURG.

IN May last the chairman and members of the Public Health Committee of Johannesburg instructed Dr. C. Porter, the medical officer of health of that town, to inquire and to report in regard to the bread-supply and bakeries of Johannesburg. The report cannot be considered satisfactory; 85·7 per cent. of the bread sold was found to be appreciably under weight. It was also found to be deficient in quality; over 65 per cent. of the samples contained alum, many had an excess of acid, and others were sour and badly baked. The bakehouses generally were in fairly good structural condition and pretty well kept, but the ventilation of many was not worthy of praise and it was suggested that an improvement could be made by the adoption of louvred roof ventilators. The shallow-well water-supply of certain bakehouses was stated to be dangerous and a possible source of typhoid fever, and a recommendation was therefore made that every bakehouse should be supplied with water from the main or from an artesian well. In those houses where this plan could not at once be adopted Dr. Porter proposed that the water from the wells should be boiled and allowed to cool before being used for making dough. The attention of each baker in Johannesburg was ordered to be called to the results of this examination and the secretary of the water company was also communicated with. Now that peace is assured in South Africa the civil authorities will be able to supervise more closely the food- and water-supply, and doubtless the unsatisfactory state of affairs which existed in Johannesburg previously to May will speedily be remedied.

THE ANATOMY OF ANKYLOSTOMA DUODENALE.

IN the *Records of the Egyptian Government School of Medicine*, published in 1901 under the authority of the Egyptian Ministry of Public Instruction, Dr. A. Looss, professor of helminthology in the school, contributes an elaborate article on an important department of his special subject. This monograph, which fills 115 pages and is illustrated by 13 large plates containing 172 figures, is headed, "The Sclerostomidæ of Horses and Donkeys in Egypt." Its chief medical interest lies in the opening portion which is devoted to some questions connected with ankylostoma duodenale, a familiar designation which Dr. Looss says is no longer retained in modern zoological nomenclature but is replaced by the name "uncinaria duodenalis." It is generally conceded by those who are familiar with ankylostomiasis that the parasites in

addition to sucking blood exercise a poisonous influence on the organism of the patient. It is also well known that the body of the parasite, and especially its anterior region, is provided with numerous large glands, distinguished as the head glands, neck glands, and œsophageal glands. Dr. Looss gives reasons for supposing that if the impairment of health which accompanies ankylostomiasis is really due to a substance secreted by the parasite this substance is probably derived from the head glands. In continuation of the research Dr. Looss turned his attention to sclerostoma, a parasite closely allied to ankylostoma and found in Egypt in immense numbers in the bodies of the equidæ. In examining the parasites he had much trouble from the tendency of their bodies to contract and to become wrinkled when they were removed from their natural habitat, but he overcame this difficulty by immersing them in alcohol of about 70 per cent. strength heated to 80° C.; they were then cleared in glycerine and mounted unstained in glycerine-gelatin.

THE ARMY MEDICAL ARRANGEMENTS FOR THE CORONATION.

THE army medical arrangements in the metropolis in connexion with the processions on June 26th and June 27th have been made public and appear to be of a most detailed and comprehensive character. Stretcher squads will be stationed immediately behind the line of troops on either side of the route; 18 ambulance and six dressing stations will be established at convenient spots; and 10 field hospitals will be located at such varying points around the centre as Kensington Gardens, Hyde Park, St. James's Park, Battersea Park, Regent's Park, Lambeth Palace, Surrey Sessions House, Tower Ditch, King's College, and Hounslow Heath. The following seven general hospitals, the first four of which are actually on Friday's route, have engaged to reserve a certain number of beds for casualties of a severe nature occurring among the troops: St. Thomas's Hospital, St. George's Hospital, Charing Cross Hospital, Westminster Hospital, St. Bartholomew's Hospital, Guy's Hospital, and King's College Hospital. Special arrangements have been made for the Colonial and Indian contingents present in London for the ceremonies of the coronation. At Alexandra Palace temporary "non-dieted" hospitals have been established to meet the wants of over 3000 officers and men, while serious cases can be drafted to St. Thomas's Home (officers), Rochester-row Station Hospital (non-commissioned Europeans), and Herbert Hospital (non-commissioned natives). Field hospitals of 50 beds will be established in the Home Park, Hampton Court, and on Hounslow Heath; a detention hospital of 14 beds will be opened at Fulham Palace for the mounted troops of the Indian contingent; and a method is to be devised for the separate treatment of infectious diseases. The medical officers in charge of the various camps have been warned as to the need of the utmost vigilance against small-pox.

THE DISTRIBUTION OF PLAGUE.

THE weekly return of the Director-General of the Sanitary Department of Egypt shows that for the week ending June 8th there were four new cases of plague admitted, of which one occurred in a European. There were two deaths, 14 recoveries, and 16 cases remained under treatment.

THE UNRESTRICTED SALE OF POISONS.

IT is, of course, difficult to suggest a satisfactory system of control by which all poisons or poisonous preparations can be sold. Tobacco, paint, and alcohol are poisons, but there is practically no limit to their sale. Whilst admitting, however, the danger to the community which the unrestricted sale of poisonous compounds intended exclusively for agricultural purposes would possibly involve it is pretty evident that the provisions of the Pharmacy Act were never intended to apply to such preparations. The sale, for instance, of a weed-killer or insecticide does not surely require the offices of a particularly well-educated or qualified person, such as is the chemist and druggist. The chemist and druggist is required to possess an accurate knowledge of poisons for obvious reasons, chief amongst which is that he dispenses them for internal administration. Elsewhere we record a case in which a seed and artificial manure merchant was summoned for selling a poisonous vegetable alkaloid known as nicotine without having his name and address on the bottle, and for selling the poison to an unknown person, and for failing to make an entry of the sale in a book kept for the purpose, contrary to the provisions of the Pharmacy Act, 1868. The preparation was sold as a "vaporiser fumigator" which is used for the destruction of greenhouse pests. Evidence was given to the effect that the compound contained over 20 per cent. of nicotine, two ounces containing as much as 186 grains of the alkaloid—a quantity, it was stated, sufficient to prove fatal to at least 300 persons. The case was considered proved and the defendant was fined £2 on each of the three summonses, including costs. Consent, however, was given to state a special case for the Court of Appeal. Instances of this sort are multiplying and it is to be hoped that the Privy Council Poisons Committee may find that they will be able to control the sale of poisons in some way which, while duly protecting the public, will not threaten to extinguish an undoubtedly important trade. We learn that the report of this committee is not expected until the end of the autumn. Their decision will have an important bearing upon the case which we have just discussed.

THE SMOKE NUISANCE IN NEW YORK.

A VERY instructive incident is reported in our columns this week by our New York correspondent in regard to the smoke nuisance which has recently arisen in that city. As is well known, the fuel used for heating purposes in New York, as in most continental cities, is anthracite. As a consequence the atmosphere of these cities is never blackened with smoke, for anthracite is a smokeless fuel. Owing, however, to the high price of hard coal in New York city, as a result of the general strike amongst the anthracite colliers cheaper and smoky coal has suddenly come into vogue. This change of fuel soon had its bad effect upon the atmosphere of the city and to some extent the inhabitants have been experiencing a condition of things similar to that frequently met with in London, where the householders are allowed to pollute the air with comparative impunity. In New York city it is a civil offence for a householder to allow smoke other than white, or cinders, dust, gas, or any offensive odour to come from his chimney. We fear that it would be impossible to impose such a restriction as that regarding the use of anthracite or smokeless coal in London. But what an excellent result would accrue could it be done. There is little doubt that the householders of the metropolis tarnish the atmosphere of London to an infinitely greater degree than does the manufacturer. There is no reason, however, why pressure should not be kept to bear upon the latter offender. It is quite easy to prevent smoke-production in a large furnace even when soft bituminous coal is used, whereby not only is a nuisance effectually checked but an important economy of fuel obtained, as we have repeatedly pointed out. In New York notice is to be sent to all persons guilty of the offence to discontinue the use of soft coal within five days and in aggravated cases within 24 hours. If the notice is not complied with prosecution is to be immediately instituted and in case of the

smoke blowing into neighbouring windows the offenders will be brought to book on a criminal charge. It is a thousand pities that the use of anthracite or smokeless coal cannot be compelled in the private dwelling-houses of London and of this country. But London and smoke are accepted by a great many as synonymous terms and not a few on grounds of sentiment would object to having this acceptation disturbed.

A WORK OF REFERENCE ON THE PUBLIC HEALTH ACTS.

LEGISLATION affecting the very wide subject of sanitary affairs has been so abundant during recent years as to render a precise acquaintance with all the Acts relating at the present time to public health somewhat laborious to acquire. The recent issue from the press of "Lumley's Public Health" in two volumes will therefore be welcomed.[1] The fifth edition was published early in 1896 and since that date many important amendments and additions have been made to the statutes concerning public health administration. In this connexion may be mentioned the amendment of the Local Government Act in May, 1896; the amendment in the Public Health Act in August of the same year as regards diseases on incoming ships and as to ports; the compulsory notification of infectious diseases in June, 1899; and the important amendments in the Housing of the Working Classes Act, 1890, in August, 1900. Furthermore, new Acts have come into operation—namely, the Locomotives Act, 1898; the Electric Lighting Clauses Act, 1899; the Sale of Food and Drugs Act, 1899; and the Factory and Workshop Act, 1901. The work, again, is invaluable in presenting typical cases that have been decided in quite recent times upon points arising under the old as well as under the new statutes. The index is very thoroughly done and altogether the two volumes are of the utmost value in facilitating the task of reference and in placing before those who consult the sections the requirements, meaning, and acceptation of the laws relating to public health.

THE Honourable Stephen Coleridge brought an action in the King's Bench Division before Mr. Justice Grantham on Wednesday last to recover damages from the Rev. David Macdonald for alleged libels published in the *Derby Express* and the *Derby Daily Telegraph*. Mr. Macdonald admitted the publication of the letters complained of, which contained, among other things, the phrase that "lovers of animals and lovers of truth will have nothing to do with his (Mr. Coleridge's) society." The jury stopped the case, being unanimously unable to see anything libellous in Mr. Macdonald's letters, a view with which the judge agreed.

THE annual provincial meeting of the Incorporated Society of Medical Officers of Health will be held on Saturday, June 28th, in the Council Chamber, Southend-on-Sea, at 12 noon. An address will be given by Dr. J. T. C. Nash on Matters of Public Health Interest in Southend.

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[1] The Public Health Acts, annotated with appendices, first edition, by W. G. Lumley, LL.M., Q.C., and Edmund Lumley, B.A., sixth edition, by Alexander Macmorran, M.A., and S. G. Lushington, M.A., B.C.L. London: Shaw and Sons. 1902. Two volumes, pp. 1710. Price £3 12s. 6d. and £2 19s. 3d. respectively.

LITERARY INTELLIGENCE.—A German translation of Dr. Charlton Bastian's "Treatise on Aphasia and other Speech Defects," by Dr. Moritz Urstein of Berlin, has just been issued by W. Engelmann of Leipsic.

THE METROPOLITAN WATER-SUPPLY: THE LONDON WATER BILL.

LORD BALFOUR of BURLEIGH presided over the meeting of the Joint Committee which was held on June 10th. The numbers and composition of the proposed Water Board were considered. The representation of authorities on the board as proposed in the Government measure is given in the third schedule of the Bill. In this schedule it was provided that the London County Council should have 10 representatives and the county councils of Essex, Kent, Middlesex, Surrey, Hertfordshire, the Conservators of the river Thames, and the Lee Conservancy Board one member each. The councils of the cities of London and Westminster and the metropolitan borough councils of Islington, Kensington, Lambeth, St. Pancras, and Stepney were to have two representatives each, and the other metropolitan boroughs one member each. In the county of Essex the borough of West Ham was to have two representatives, and each of four large urban districts one member each. In Kent two urban districts were to have one member each; in Middlesex four and in Surrey two large districts were to have one member each.

The time of the Committee was chiefly occupied in hearing evidence and arguments on a proposal of the London County Council, the object of which briefly was to diminish the number of representatives allotted to other authorities and to increase the number allotted to itself, so that it might control the whole business.

The first proposal of the London County Council was that the number of representatives on the Water Board should be reduced to 29.

Sir B. T. LEECH, an alderman of Manchester and deputy chairman of the Water Committee of that city, said that the water-supply of Manchester was managed by a committee of 18 members and that he was convinced that a board of 69 members was too large; he also gave it as his opinion that the London County Council should have the control of the water-supply.

Mr. W. ANDERSON, treasurer of the Edinburgh Water Trust, said that the number of the Edinburgh trustees was 25 and he thought that a managing body should not be too numerous.

One of the deputy town clerks of Glasgow gave evidence to the effect that the city of Glasgow comprised an area of 12½ square miles; the total area of the water-supply was 87 square miles, and the boroughs outside Glasgow had no representation on the committee. The Government Bill, he thought, would constitute an unwieldy body. (It may be worth while to note, without going into detail in the matter, that the events which led to the possession of their water-supply by the city of Glasgow have no counterpart in the history of the present London water-supply. And this fact must be well known to those responsible for the "case" presented by the London County Council.)

Mr. BRYAN, engineer to the East London Waterworks Company, gave it as his opinion that every municipality ought to be represented on the Water Board. Members of the municipal councils had given valuable assistance to the East London Company in times of drought. He thought, having regard to the amount of administrative work which the water-supply necessarily entailed that the number of members provided for in the Government Bill was not excessive because the details of the work of management would have to be delegated to committees.

On behalf of the Local Government Board Mr. FITZGERALD, K.C., said that the Mayors of Stepney, of Holborn, of Kensington, and of Hammersmith wished to have an opportunity of stating their views in favour of the Bill as drawn, but he did not think it necessary to call them as witnesses. The Bill was also supported by counsel who represented respectively the city of Westminster, the council of the urban district of East Ham, the county councils of Middlesex, of Hertfordshire, and of Essex, and the urban districts of Hornsey and of Wimbledon.

On behalf of the London County Council Mr. BALFOUR BROWNE, K.C., suggested that the amendment proposed by that body would lead to the constitution of a Water Board like that proposed by Lord James of Hereford (Metropolitan Counties Water Board Bill, March, 1896).

Of the two amendments introduced by the London County Council the first, which proposed that 29 instead of 67

representatives should sit on the Water Board, provided that the members elected should be allocated as follows: London County Council, 16; the City of London, the borough of West Ham and the county councils of Essex and of Middlesex, two each; the county councils of Kent, of Surrey, and of Hertfordshire, the Conservators of the Thames, and the Lee Conservancy Board, one each. The second amendment, introduced in case the first was not adopted and which made provision for the election of 33 representatives, proposed that they should be allotted somewhat differently. Two additional members each were to be given to the county councils of Kent, of Middlesex, and of Surrey, and two less to the County Council of London.

Mr. WEDDERBURN, K.C., on behalf of the Kent County Council, supported the Government Bill.

Mr. BLENNERHASSETT, K.C., on behalf of the City of Westminster, protested against the attempt which had been made to deprive that city and the metropolitan boroughs of the representatives which had been allotted to them.

Mr. FITZGERALD, on behalf of the Local Government Board, insisted that it was impossible to force five or six counties into a board dominated by the London County Council.

The Committee decided unanimously to reject the proposal to reduce the number of members on the board to 29, and they further decided on an equality of votes not to reduce the number to 33. An amendment proposed by a member of the Committee to increase the number of representatives of the London County Council from 10 to 16 was lost by 7 votes to 3. The Committee likewise declined to advise any increase to the number (two) of representatives allotted to the City of Westminster.

At the sitting of the Joint Committee which was held on June 11th Lord BALFOUR of BURLEIGH again presided.

Mr. BAGGALLAY, K.C., on behalf of the Conservators of the river Thames, asked that the number of members assigned to the board should be increased to three and that it should not be prescribed that distinctive representation should be given to the upper part of the river.

Sir F. DIXON HARTLAND, chairman of the Thames Conservancy Board, said that there was no antagonism between the interests of the lower and upper parts of the river and that the board, as a whole, was strongly of opinion that the value of the additional representation which it claimed would in great measure be lost should specialised representation be made in the way suggested.

The Committee amended the schedule by adding two representatives to the Thames Conservators but with the proviso that one shall represent the upper districts of the river. The schedule was further amended by the addition of one member to the urban district of Tottenham and one to the urban district of Hornsey. In consequence of these additional members the total number of the members of the Water Board was increased from 67 to 71.

Lord BALFOUR of BURLEIGH announced that the schedule as amended would stand as part of the Bill and that a special report would be made by the Committee as to the mode of procedure by which its decision had been made.

The Committee having settled the schedule returned to consider Clause 11 of the Bill. This clause deals with the way in which the expenses of the Board are to be met and the manner in which the necessary money is to be raised in case the water rents are insufficient for the required purpose. It was proposed by the London County Council that in order to provide for such a deficiency a rate should be levied in London and in such of the extra-metropolitan urban and rural districts as are within the limits of the water-supply. This amendment was lost on "an equality of votes."

The Local Government Board, in order to conform with the wishes of the Corporation of the City of Westminster, proposed a provision to the effect that no reduction in the water rents at present in force should be made if such a reduction would, or would be likely to, cause a deficiency in the water fund.

The Committee accepted this amendment.

DONATIONS AND BEQUESTS.—The treasurers of the Middlesex Hospital have received from Mr. Timothy Bean a further sum of one thousand guineas for the purpose of endowing another bed in the cancer wing, to be known as the "Rebecca Bean" bed; also a further grant of £500 from the trustees of the Smith's (Kensington Estate) Charity to the general fund.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following is a record of some of the principal amounts that have been received in aid of the Fund up to the time of going to press on Thursday. The total sum then amounted to £20,000. At the corresponding period last year the total was £25,000; but this included a donation of £10,000 from Mr. George Herring, who has not yet, of course, been able to add his generous offer of 5*s.* in the £1 on all amounts collected in the various churches and chapels. The sum collected to date is, therefore, most encouraging.

	£	*s.*	*d.*
St. Paul's Cathedral	1600	0	0
St. Michael's, Chester-square	1382	0	0
Mr. Charles Morrison	1000	0	0
St. Paul's, Onslow-square	494	0	0
St. Mary's, Bryanston-square	338	0	0
St. Nicholas, Chislehurst	286	0	0
Theistic Church, Swallow-street	216	0	0
Delta (24th donation)	200	0	0
Union Chapel, Islington	195	0	0
Holy Trinity, Sydenham	155	0	0
Finchley Parish Church	148	0	0
St. James's, Kidbrook	128	0	0
St. James's, Piccadilly	127	0	0
Brixton Congregational Church	126	0	0
St. John's Presbyterian Church, Forest-hill	117	0	0
St. Barnabas, Kensington	115	0	0
Greek Church	111	0	0
Church of the Annunciation, Chislehurst	108	0	0
St. James's, Clapham Park	107	0	0
Messrs. Chinnery Bros.	105	0	0
Mr. J. S. Gilliat	105	0	0
St. Paul's Presbyterian Church, Westbourne-grove	105	0	0
Mr. A. G. Phillips	100	0	0
Mr. William Herring	100	0	0
St. John's Presbyterian Church, Kensington	100	0	0
Mr. F. G. Debenham	100	0	0
St. George's, Bickley	93	0	0
King's Weigh House Church, Duke-street	90	0	0
St. Augustine's, Highbury	89	0	0
St. Mary's, Shortlands	89	0	0
Victoria-park Christian Evidence Association	87	0	0
St. George's, Beckenham	86	0	0
St. Mary's, Boltons	82	0	0
Bromley Parish Church, Kent	72	0	0
St. Andrew's, Leytonstone	71	0	0
St. Saviour's, Paddington	70	0	0
St. James's, Hatcham	67	0	0
Christ Church, Brondesbury	66	0	0
Highgate Presbyterian Church	66	0	0
Catholic Church, Farm-street	65	0	0
St. Margaret's, Lothbury	65	0	0
St. Augustine's, Queen's Gate	64	0	0
St. George's, Perry Hill	64	0	0
St. Luke's Wandsworth Common	64	0	0
Orange-street Congregational Church	62	0	0
Christ Church, Highbury	61	0	0
St. Mary's, Plaistow, Kent	59	0	0
St. Gabriel's, Warwick-square	59	0	0
St. Matthew's, Brixton	57	0	0
St. Paul's, Forest-hill	56	0	0
St. John's, Bromley, Kent	56	0	0
Crouch Hill Presbyterian Church	56	0	0
Dulwich College Chapel	55	0	0
St. Saviour's, Brixton-hill	55	0	0
St. Matthew's, Ealing Common	54	0	0
St. Anne's, Wandsworth	54	0	0
St. Peter's, Ealing	53	0	0
Messrs. Longmans and Co.	52	10	0
Mr. A. Dunkels	52	10	0
Mr. A. G. Sandeman	50	0	0
Mr. Rudolf Wissmann	50	0	0
Earl of Cranbrook	50	0	0
Crayford Parish Church	50	0	0
Mrs. Wells	50	0	0
Lord Rathmore	50	0	0
Walthamstow Parish Church	50	0	0
West Wickham Parish Church	50	0	0
St. Mary Magdalene's, Enfield	49	0	0
Effra-road Unitarian Church	47	0	0
Merton Parish Church	47	0	0
Emmanuel Church, West Hampstead	45	0	0
Christ Church, Newgate-street	45	0	0
St. Mary the Virgin, Putney	45	0	0
Lingfield Parish Church	44	0	0
St. John's, Redhill	44	0	0
Lewisham High Road Congregational Church	43	0	0
Ferme Park Baptist, Hornsey	43	0	0
Trinity Presbyterian, Notting-hill	43	0	0
Mr. and Mrs. C. E. Layton	42	0	0
Vintners' Company	42	0	0
St. Mary's Old Church, Stoke Newington	42	0	0
Archway-road Wesleyan	41	0	0
St. Luke's, Battersea	40	0	0
All Saints', Upper Norwood	39	0	0
Guards' Chapel, Chelsea	37	0	0
Wesleyan, Wandsworth Circuit	37	0	0
Blackheath Wesleyan Church	37	0	0
St. John's, Sidcup	36	0	0

ANNUAL DINNER OF THE INDIAN MEDICAL SERVICE.

THE annual dinner of the Indian Medical Service was held at the Café Monico, Piccadilly-circus, London, on Thursday, June 12th, Dr. W. S. PLAYFAIR occupying the chair.

After the usual loyal toasts had been felicitously proposed by the CHAIRMAN and heartily received "The Sister Services" was proposed by Surgeon-General A. C. C. DE RENZY, C.B., and responded to by Surgeon-General W. TAYLOR, C.B., Director-General of the Army Medical Service.

Surgeon-General Sir JOSEPH FAYRER, Bart., K.C.S.I., F.R.S., in submitting "The Guests" briefly alluded to the great services rendered by the President of the Royal College of Physicians, Sir William Church, to medicine in general and more particularly to his work as a member of the Royal Commission appointed to inquire into the charges made against the medical services in the recent war in South Africa; he then read the concluding words of the report of the Royal Commission with which our readers are familiar but as they will bear repeating we reproduce them. "But in concluding our report we desire to say that in our judgment, reviewing the campaign as a whole, it has not been one where it can properly be said that the medical and hospital arrangements have broken down. There has been nothing in the nature of a scandal with regard to the care of the sick and wounded; no general or widespread neglect of patients or indifference to their suffering. And all witnesses of experience in other wars are practically unanimous in the view that, taking it all in all, in no campaign have the sick and wounded been so well looked after as they have in this." In proceeding to congratulate Surgeon-General Taylor, the Director-General of the Royal Army Medical Corps, on his appointment to that high office "we wish," Sir J. Fayrer said, "to express our satisfaction that the choice of Government should have fallen on one so well fitted to perform its duties. It is now charged with greater powers and higher responsibilities, with higher rank, more fitting remuneration, and a place more befitting its importance in the councils of the War Office, and one in which, if the spirit as well as the letter of the new rules be observed, the opportunities of doing good will be infinitely enhanced. We anticipate with much confidence the best results from Surgeon-General Taylor's appointment and we offer him our best wishes with our hearty congratulations." Sir J. Fayrer also bore testimony to the scientific work and personal worth of Sir T. Lauder Brunton and Dr. W. H. Allchin and to the aid that was always given to the medical services by the editors of the medical journals.

Sir WILLIAM CHURCH replied and in concluding his speech remarked that he was perfectly certain that every one of the Royal Commissioners who signed the report most earnestly meant every word that he said.

"The Indian Medical Service" was given by the CHAIRMAN who said that he had not the slightest doubt that many present were saying, "Who on earth is this man and by what possible right does he represent the Indian Medical Service?" To such he might say that he thoroughly agreed with them and nothing but the kind insistence of their committee could have persuaded him to fill a position for which he felt that he had no qualification. Just 42 years had elapsed since he, a young and obscure assistant-surgeon, had to leave India from ill-health after only three years' service, with something like despair in his heart at having to abandon what he had mapped out for himself as the career of his life. Luckily, like others similarly situated, he had his profession to fall back on. He was told that the best opening then was in "obstetric medicine." The difficulty was that he practically did not know what "obstetric medicine" was. He adopted the plan taken by the literary hack who had to write an article on "Chinese Metaphysics," who read up "China" and then read up "Metaphysics" and combined his information. So he read up "Obstetrics" and then read up "Medicine" and combined this information and on that combined information he had managed to subsist ever since. One qualification for his position to-night he possessed in a degree excelled by no man, what was a profound regard for the grand old service represented to-night, which had been in the past the finest public medical service which ever existed and which he did not doubt would continue to be so in the future. After further remarks the Chairman dwelt on the great loss the service had experienced in the death of its director-general—Surgeon-General Harvey—who was in the chair last year. After dwelling on his career he expressed the conviction that his memory would always be held dear by the service over which he presided.

The health of "The Chairman" was proposed by Deputy Surgeon-General H. CAYLEY, C.M.G., and Dr. PLAYFAIR replied.

A very pleasant evening concluded with an expression of thanks to Colonel P. J. Freyer for the successful results of his labours as honorary secretary of the dinner.

The following is a list of the officers and guests present:—

Surgeon-Generals: W. W. Beatson, A. C. De Renzy, C.B., Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S., W. R. Hooper, C.S.I., W. R. Rice, C.S.I., C. Sibthorpe, C.B., and P. W. Sutherland. *Colonels:* W. E. Cates, H. Cayley, C.M.G., D. E. Hughes, B. Williamson, and W. A. S. Wynne. *Lieutenant-Colonels:* M. L. Bartholomeusz, A. Crombie, P. J. Freyer, G. H. D. Gimlette, P. de H. Haig, H. N. V. Harington, G. F. A. Harris, D. F. Keegan, W. A. Lee, I. B. Lyon, C.I.E., D. P. MacDonald, R. Macrae, J. Parker, J. Reid, T. G. Skardon, W. H. Thornhill, J. F. Tuohy, and A. H. Williams. *Majors:* A. W. Alcock, E. H. Brown, W. S. Caldwell, G. Giffard, P. C. H. Strickland, and J. L. T. Jones. *Captains:* H. M. Earle, F. A. L. Hammond, S. A. Harriss, W. D. Hayward, J. G. Hulbert, E. C. McLeod, C. Milne, A. E. Hayward Pinch, and G. Tate.

Guests: Sir William Church, Bart., President of the Royal College of Physicians of London; Sir T. Lauder Brunton; Surgeon-General W. Taylor, C.B., Director-General A.M.S.; Dr. W. H. Allchin, President of the Medical Society; Dr. Dawson Williams; and Mr. Thomas Wakley, jun.

ANNUAL DINNER OF THE ROYAL ARMY MEDICAL CORPS.

THIS dinner was held on Monday, June 16th, in the Whitehall Rooms of the Hôtel Métropole, London. At the conclusion of the dinner Surgeon-General W. TAYLOR, C.B., Director-General, who occupied the chair, proposed the toast of "The King," remarking that they were all glad to think that the indisposition from which His Majesty was suffering was not of a serious nature. He then proposed the health of "The Queen, the Prince and the Princess of Wales, and the rest of the Royal Family." Her Majesty was, he said, more closely connected with them than had any sovereign been in days gone by, seeing that she had graciously consented to act as president of their nursing board. These were the only toasts on the programme but Surgeon-General Taylor, rising again, said he thought it right to ask them to drink the health of one who as honorary secretary of the annual dinners on many previous occasions had done much to add to their comfort—he alluded to Lieutenant-Colonel J. Hector, to whom he was sure they would admit that they were all deeply indebted. This toast was received with much applause and musical honours and Lieutenant Colonel HECTOR briefly responded. We must not omit to mention that in the reception-room, where the company gathered previously to the dinner, there was exhibited a portrait in oils of the late Director-General, Surgeon-General J. Jameson, C.B. This portrait was a replica of the one by Mr. W. R. Symons which is now being exhibited at the Royal Academy and is to be presented to Surgeon-General Jameson by his brother officers. The dinner was very well attended and a most agreeable evening was spent, much credit being due to the officer who has so worthily succeeded Lieutenant-Colonel Hector in the discharge of the duties of honorary secretary—Lieutenant-Colonel E. M. Wilson, C.M.G., D.S.O. The following is a list of those present:—

Honorary Members.—Mr. A. D. Fripp, C.B., C.V.O., Dr. J. Galloway, and Dr. E. C. Perry.

Members.—Surgeon-Generals: A. F. Bradshaw, C.B., Sir J. H. K. Innes, K.C.B., K.H.S., A. H. Keogh, C.B., T. Maunsell, C.B., H. S. Muir, C.B., A. F. Preston, K.H.P., J. B. C. Reade, C.B., K.H.S., P. B. Smith, W. Taylor, C.B., K.H.P., and J. Warren. *Deputy-Surgeon-Generals:* O. Codrington and J. H. Jeffcoat.

Brigade-Surgeons: C. Mackinnon and T. W. Wright. *Colonels:* W. L. Gubbins, G. D. N. Leake, T. Ligertwood, W. T. Martin, J. Maturin, J. Macnamara, R. H. Quill, F. B. Scott, C.M.G., and W. F. Stevenson, C.B. *Lieutenant-Colonels:* J. Anderson, C.I.E., W. Babtie, V.C., C.M.G., H. L. Battersby, J. F. Beattie, U. J. Bourke, A. L. Browne, D. Bruce, S. H. Carter, Sir J. R. A. Clark, Bart., T. M. Corker, A. B. Cottell, J. J. Crean, A. M. Davies, J. R. Dodd, W. G. Don, P. M. Ellis, E. H. Fenn, C.I.E., M. M. Gallwey, F. A. Harris, H. G. Hathaway, L. Haywood, J. Hector, F. H. Hensman, C.M.G., R. D. Hodson, F. Howard, H. W. Hubbard, H. E. R. James, R. Jennings, J. W. Jerome, W. Johnston, W. Keir, H. C. Kirkpatrick, J. Macartney, J. W. Morgan, J. E. Nicholson, E. North, H. J. O'Brien, W. W. Pope, S. K. Ray, J. H. Reynolds, V.C., W. F. Rattledge, W. Temple, V.C., F. H. Treherne, G. T. Trewman, P. B. Tuthill, E. O. Wight, and E. M. Wilson, C.M.G., D.S.O. *Majors:* H. A. Cummins, C.M.G., A. Dodd, W. L. Gray, F. J. Greig, J. Hickman, T. McCulloch, W. G. Macpherson, A. H. Morgan, D.S.O., J. C. Morgan, J. D. T. Reckitt, B. H. Scott, B. M. Skinner, G. J. A. Tuke, L. Way, and M. T. Yarr. *Surgeon-Majors:* C. R. Kilkelly, C.M.G., and Allan Perry. *Captains:* C. W. Duggan, R. S. H. Fuhr, D.S.O., A. F. Heaton, E. T. Inkson, V.C., A. Pearse, C. T. Samman, and E. McK. Williams. *Lieutenants:* T. Biggam, L. Cotterill, B. A. Craig, H. E. M. Douglas, V.C., D.S.O., T. B. Unwin, and J. H. R. Winder.

Guests.—Surgeon-General W. R. Hooper, C.S.I., Indian Medical Service, Mr. Vesey Holt, Mr. Thomas Wakley, jun., and Dr. Dawson Williams.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on June 12th, Mr. HENRY G. HOWSE, the President, being in the chair.

It was resolved to lend to the University of London specimens from the museum during the year 1902, subject to the University agreeing to pay any expenses connected with the removal of the specimens from one institution to the other and any damage that might be occasioned to the specimens.

The Council elected the following examiners:—

Elementary Biology.—Herbert Willoughby Lyle, Peter Chalmers Mitchell, Frederick Gymer Parsons, and Walter G. Ridewood.

Anatomy (under the Conjoint Examining Board).—Christopher Addison, Arthur Keith, Arthur Thomson, and Holburt Jacob Waring.

Physiology (under the Conjoint Examining Board).—Thomas Grigor Brodie, George Alfred Buckmaster, and William Henry Thompson.

Anatomy (for the Fellowship).—James Ernest Lane, Berkeley G. A. Moynihan, Frederick Gymer Parsons, and Alfred Harry Young.

Physiology (for the Fellowship).—De Burgh Birch, Leonard Erskine Hill, Edward Waymouth Reid, and Ernest Henry Starling.

Midwifery (under the Conjoint Examining Board).—George Francis Blacker, William Radford Dakin, William Duncan, and James Henry Targett.

For the Diploma in Public Health.—Part 1—Alexander Grant Russell Foulerton. *Part 2*—Sydney Arthur Monckton Copeman.

A letter was read from Mr. Morton Smale resigning his seat on the Board of Examiners in Dental Surgery. Mr. Morton Smale's resignation was accepted and the Council expressed their appreciation of his services during the time he was on the Board, and the PRESIDENT stated that the vacancy so occasioned would be filled up at the ordinary meeting of the Council following the quarterly meeting in July.

A letter was read from Mr. A. Hopewell Smith, honorary secretary of the Odontological Society of Great Britain, reporting that at the last meeting of the Council of the society a vote of thanks was accorded to the Council of the College for storing the museum specimens of the society during the removal of the institution from Leicester-square to Hanover-square.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at the late session. The best thanks of the Council were given to Mr. Bryant for his services as the representative of the College in the General Medical Council.

In response to a request from the President of the Royal College of Physicians of London the Council nominated the President, Mr. H. G. Howse, as a member of a committee to be appointed for the purpose of preparing a revised edition of the "Nomenclature of Diseases."

July 8th was appointed as the day for receiving a deputation from the Association of Licentiates of the Royal College of Physicians of London and Members of the Royal College of Surgeons of England with a petition to the Council. The petition asks that the Royal Colleges will assist the petitioners in obtaining the privilege of offering themselves as candidates for the final examination for a degree in medicine at a British university or in some other way removing the disability under which they labour of being unable to style themselves "Doctor."

It was resolved to ask the Royal College of Physicians of London to appoint a committee to act in conjunction with a committee of the Council in order to decide whether or not any practicable scheme can be devised for entering into combination with the University of London for the adoption of a system of common examination for the M.B. degree of the University and the diplomas of Licentiate of the Royal College of Physicians of London and of Member of the Royal College of Surgeons of England.

THE REORGANISATION OF THE BRITISH MEDICAL ASSOCIATION.

AN extraordinary general meeting of the members of the British Medical Association was held at Exeter Hall on June 18th, at which 124 were present. By three votes in excess of the necessary three-quarters majority the new regulations for the Association were adopted. A further extraordinary general meeting, however, will have to be held on July 9th to confirm what has been done.

The chairman of the meeting was Dr. G. B. FERGUSON of Cheltenham, the President of the Association, who pointed out that the scheme of reorganisation of the Association had been discussed for two years. Many meetings had been held to consider it and at least £1000 of the money of the Association had been expended upon it. In his opinion there was nothing particularly revolutionary in the scheme, though the Council would no longer be able to disregard the findings of annual representative meetings.

Mr. EDMUND OWEN, in the course of his remarks, said that the feeling of dissatisfaction with the Association as previously constituted was very widely spread in the ranks of the profession. It had been said that the scheme of reorganisation of the Association was intended to revolutionise the condition of affairs. The word "revolution" meant an entire change in the government and that was exactly what was intended to be effected in the Association. They must accept the scheme as it stood because it was like a stone arch—if one of the stones was pulled out the whole would give way.

Mr. ANDREW CLARK believed that the scheme would revolutionise the Association in a way that everyone would wish. It certainly could not be called a hole-and-corner scheme and it could not be said to be either hurried or ill-drawn. It could be accurately described as a give-and-take arrangement between the reformers and those who were opposed to change. Much objection had been raised to the plan of cumulative voting, but if it was found that that did not work it could be altered in three months' time.

Dr. J. BRASSEY BRIERLEY, who experienced a mixed reception, criticised the scheme from a financial point of view and said that the annual meetings of the branches were mere picnics. The proposed representative meetings were altogether out of touch with modern thought. Dr. Brierley concluded by saying that the scheme had been passed at the Cheltenham meeting, but there was such a charming atmosphere of hospitality there that the members would have passed anything; he believed they would even have stood on their heads if told to do so.

Mr. GARRETT HORDER thought that the Association would be carried on better if the council were to make more business-like arrangements for the annual meeting. The proposed scheme was a leap in the dark and he was afraid that it would a very fatal leap.

Dr. J. WARD COUSINS emphasised the point that the 124 members at the meeting were acting for nearly 19,000 gentlemen. He thought that the scheme would dislocate the vital centre of the Association and that the spirit of trade-unionism pervading the scheme was unworthy of a liberal profession.

Dr. A. COX of Gateshead and Mr. J. S. WHITAKER made speeches which were well received in favour of adopting the proposed scheme.

After Mr. Whitaker's remarks the meeting wished to proceed at once to voting; Dr. FERGUSON, however, persuaded them first to hear a few words from Dr. LORIMER HART who promised to be brief. There was some confusion in regard to the result of the voting until a poll was demanded, and the exact figures of 28 against the scheme and 96 for the scheme definitely cleared up the question whether the necessary three-quarters majority of those voting had been secured.

THE SECOND ANNUAL CONVERSAZIONE OF THE ROYAL SOCIETY.

CONTRARY to expectation raised by coming coronation festivities and the presence of many august visitors in London the second annual conversazione of the Royal Society, held at Burlington House on June 18th, was decidedly dull from the point of view of exhibits. The company, however, was perhaps the most brilliant ever gathered together in the Royal Society's rooms. Quite two-thirds of the exhibits had been previously shown on "black night," as the first conversazione is called from the fact that only gentlemen are present, while at the second demonstration the Fellows are invited to bring ladies.

We need, therefore, not repeat a description of the experiments that were shown on the first occasion, although in some instances these were amplified. Mr. Mackenzie Davidson, for example, in addition to the stereoscopic x-ray transparencies and negatives, exhibited also a remarkable x-ray photograph of a bullet fired from a revolver. The photograph showed the nozzle of a revolver and the track of the bullet in its flight when fired from it. The picture is the result of an exposure not exceeding $\frac{1}{10000}$th part of a second in duration. Professor Ramsay still chose krypton as a pretty subject for exhibit. This time he produced a beautiful miniature aurora borealis. The spectrum of the aurora has been shown to contain lines due to the presence of krypton and the great majority of the lines are coincident with those of the krypton spark spectrum. The discharge can be deflected by a magnet sending out streamers in the lines of magnetic force and thus resembling the phenomena of the aurora. His colleague in research, Dr. Morris W. Travers, exhibited a compact apparatus for liquefying hydrogen. Temperatures comparatively near the absolute zero are attained by its means. The West Indian Volcanoes Committee of the Royal Society exhibited some interesting specimens of photographs illustrating the fall of volcanic dust at Barbados on May 7th and 8th, 1902, and Mr. Henry Crookes exhibited similar specimens. It is estimated that from 2,000,000 to 3,000,000 tons of this dust fell in seven or eight hours. The dust consists chiefly of the silicates of iron, lime, aluminium, and magnesium. Mr. E. J. Bles showed some living tadpoles of the Cape clawed frog which are of considerable interest from the fact that their remarkable transparency allows the course of the nerves, blood-vessels, muscles, and so on, of the head to be easily studied in the living animal. Close by was a series of specimens illustrating the life-history of the organism which is the cause of the tsetse-fly disease, shown by Mr. H. G. Plimmer; and the same gentleman, with Colonel Bruce, exhibited a specimen of apiosoma bigeminum, the parasite found in the blood of cattle stricken with Texas fever.

The demonstrations given by means of the electric lantern in the meeting room attracted considerable interest, the series of slides illustrating M. Santos Dumont's trip in his balloon and the accident to it at Monte Carlo, perhaps, claiming the closest attention. The slides were prepared from negatives taken by Mr. Buchanan in the steam launch belonging to the Prince of Monaco which was always under steam when M. Dumont made his flying excursions over the Bay of Monaco. This boat was instrumental in rescuing the aeronaut and in recovering and landing the material of the balloon after the accident. The collapse of the balloon was not complete until the shore had been reached and it was towed through the air the whole way.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8555 births and 4271 deaths were registered during the week ending June 14th. The annual rate of mortality in these towns, which had been 16·7, 16·5, and 16·0 per 1000 in the three preceding weeks, further declined last week to 15·0 per 1000. In London the death-rate was 14·1 per 1000, while it averaged 15·4 in the 75 other large towns. The lowest death-rates in these towns were 6·6 in Coventry, 8·1 in Grimsby, 8·2 in Smethwick, 8·3 in Hornsey, 9·0 in Willesden, 10·2 in Wallasey, and 10·3 in Walthamstow; the highest rates were 20·3 in Salford, 20·8 in Gateshead, 21·4 in West Bromwich, 21·7 in South Shields, 22·0 in Tynemouth, 23·5 in Middlesbrough, and 25·4 in Wigan. The 4271 deaths in these towns last week included 496 which were referred to the principal zymotic diseases, against 531, 505, and 555 in the three preceding weeks; of these 496 deaths 127 resulted from measles, 115 from whooping-cough, 63 from diphtheria, 61 from diarrhœa, 55 from scarlet fever, 45 from small-pox, and 30 from "fever" (principally enteric). No death from any of these diseases was registered last week in Walthamstow, Hastings, Devonport, Burton-on-Trent, Wolverhampton, or Merthyr Tydfil; while the highest zymotic death-rates were recorded in Tottenham, East Ham, Wigan, Burnley, Barrow-in-Furness, South Shields, and Rhondda. The greatest proportional mortality from measles occurred in Derby, Oldham, Barrow-in-Furness, and Rhondda; from scarlet fever in Birmingham, West Bromwich, Bolton, and Burnley; from diphtheria in East Ham, Hanley, and Stockport; from whooping-cough in Norwich, Birkenhead, Wigan, Barrow-in-Furness, and South Shields; from "fever" in East Ham; and from diarrhœa in Burnley and Swansea. Of the fatal cases of small-pox registered last week, 29 belonged to London, nine to Tottenham, two to West Ham, and one each to Hornsey, East Ham, Leyton, Birmingham, and Swansea. The Metropolitan Asylums hospitals contained 1035 small-pox patients at the end of last week, against numbers decreasing from 1515 to 1162 at the end of the seven preceding weeks; 157 new cases were admitted during the week, against 307, 251, and 188 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2236, 2266, and 2314 on the three preceding Saturdays, had further risen to 2347 on Saturday, June 14th; 282 new cases were admitted during the week, against 280, 319, and 310 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 237, 261, and 200 in the three preceding weeks, further declined last week to 167, and were 30 below the corrected average. The causes of 65, or 1·5 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Manchester, Salford, Leeds, Newcastle, and in 47 other smaller towns; the largest proportions of uncertified deaths were registered in Ipswich, Liverpool, St. Helens, Blackburn, Preston, Halifax, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3, 19·3, and 19·3 per 1000 in the three preceding weeks, further declined to 19·0 per 1000 during the week ending June 14th, but showed an excess of 4·0 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·9 in Leith and 14·1 in Perth to 20·3 in Glasgow and 20·5 in Dundee. The 614 deaths in these towns included 21 which were referred to whooping-cough, 18 to measles, 18 to diarrhœa, four to scarlet fever, four to "fever," and three to diphtheria. In all 68 deaths resulted from these principal zymotic diseases last week, against 55, 57, and 61 in the three preceding weeks. These 68 deaths were equal to an annual rate of 2·1 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 22 and 15 in the two preceding weeks, rose again last week to 21, of which 13 occurred in Glasgow, four in Edinburgh, two in Dundee, and two in Paisley. The deaths from measles, which had been 13 and 22 in the two preceding weeks, declined again to 18 last week, and included 10 in Glasgow and three in Edinburgh. The fatal cases of diarrhœa, which had been 14, 15, and 16 in the three preceding weeks, further increased last week to 18, of which nine were registered in Glasgow and six in Dundee. The deaths from scarlet fever, which had been six, one, and

three in the three preceding weeks, rose again to four last week and included two in Glasgow. The fatal cases of "fever," which had been two in each of the two preceding weeks, increased last week to four, of which two were recorded in Glasgow. The three deaths from diphtheria corresponded with the number in the preceding week and included two in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 156, 129, and 116 in the three preceding weeks, rose again last week to 129, and exceeded by 28 the number in the corresponding period of last year. The causes of 27, or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·3 and 19·8 per 1000 in the two preceding weeks, further declined to 19·7 per 1000 during the week ending June 14th. During the past four weeks the death-rate has averaged 20·2 per 1000, the rates during the same period being 15·5 in London and 19·0 in Edinburgh. The 143 deaths of persons belonging to Dublin registered during the week under notice showed a slight decline from the number in the preceding week and included 10 which were referred to the principal zymotic diseases, against eight and six in the two preceding weeks; of these, four resulted from measles, three from whooping-cough, and one each from diphtheria, from "fever," and from diarrhœa. These 10 deaths were equal to an annual rate of 1·4 per 1000, the zymotic death-rates during the same period being 1·7 in London and 1·5 in Edinburgh. The fatal cases of measles, which had been two and three in the two preceding weeks, further rose last week to four; and the deaths from whooping-cough increased to three, having been one in each of the two preceding weeks. The 143 deaths in Dublin last week included 28 of children under one year of age and 32 of persons aged upwards of 60 years; the deaths of infants showed a decline, while those of elderly persons were considerably in excess of the number recorded in the preceding week. Six inquest cases and nine deaths from violence were registered; and 53, or more than a third, of the deaths occurred in public institutions. The causes of nine, or more than 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned qualified candidates for the Naval Medical Service have been appointed Surgeons in His Majesty's Fleet:—Charles Arthur Gayer Phipps, William Rhodes Harrison, Charles Kendal Bushe, Reginald Lewis Jones, Walter Goldsworthy Edwards, Frank Elliott Bolton, Robert Humphries Atkins, Stanley Samuel Howard Shannon, James Arthur Thompson, Vaughan Bateson, and Charles Joseph O'Connell,

The following appointments are notified: — Deputy Inspector-General R. Bentham to Plymouth Hospital. Fleet Surgeon W. M. Lory to the *Vernon* for the *Devastation*. Staff Surgeons: F. W. Parker to the *Wildfire* for the *Immortalité*; G. Hewlett to the *Excellent* for the *Hero*; H. R. Osborne to the *Cambridge* for the *Conqueror*; H. J. Hadden to the *Excellent* for the *Narcissus*; and B. C. E. F. Gunn to the *Wildfire* for the *Edinburgh*. Surgeons: C. R. Steward to the *Australia* for the *Spanker*; G. Taylor to the *Pembroke* for the *Sheldrake*; A. Woollcombe to the *Vivid* for the *Sharpshooter*; W. P. Walker to the *Melampus* for the *Skipjack*; W. E. Ruttledge to the *Anson* for the *Speedwell*; E. F. Ellis to the *Duke of Wellington* for the *Seagull*; A. S. G. Bell to the *Pomone*, additional and on recommissioning; D. V. Lowndes to the *Hannibal*; and T. Marles-Thomas to the *Australia*.

ROYAL ARMY MEDICAL CORPS.

Colonel John Maturin is placed on retired pay. Dated June 16th, 1902.

The undermentioned Lieutenant-Colonels to be Colonels on augmentation (dated April 1st, 1902):—Blennerhassett M. Blennerhasset, C.M.G., and William B. Slaughter.

Lieutenant-Colonel S. Townsend is transferred to the charge of the Station Hospital at Secunderabad. Lieutenant-Colonel P. M. Ellis acts as Principal Medical Officer, Eastern District, *pro. tem.*

IMPERIAL YEOMANRY.

Surgeon-Lieutenant W. W. Nuttall, Leicestershire (Prince Albert's Own), resigns his commission and receives a new commission, subject to the provisions of the Militia and Yeomanry Act, 1901, retaining his present rank and seniority.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel J. J. Saville, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers.

ROYAL ARMY MEDICAL CORPS (MILITIA).

The undermentioned to be Lieutenants: Charles Roger Tichborne, Richard Le Geyt Worsley, and James Collins Furness.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Devonshire: Surgeon-Captain J. W. Hodgson to be Surgeon-Major.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

Gloucester and Somerset: Surgeon-Captain A. W. Dalby, from 3rd Volunteer Battalion (Somersetshire Light Infantry), to be Surgeon-Captain, and to command under paragraph 55A Volunteer Regulations. Harwich: Surgeon-Captain S. S. Hoyland, from the 1st Volunteer Battalion the Suffolk Regiment, to be Surgeon-Major, and to command under paragraph 55A Volunteer Regulations. Home Counties: Surgeon-Lieutenant C. J. Deyns to be Surgeon-Captain. Seaforth and Cameron: Surgeon-Captain J. Macdonald, from 1st Volunteer Battalion the Queen's Own Cameron Highlanders, to be Surgeon-Captain, and to command under paragraph 55A Volunteer Regulations.

NOTES FROM SOUTH AFRICA.

Lieutenant C. E. Fleming, R.A.M.C., and Civil Surgeon Symes are on passage home from South Africa.

Civil Surgeons Acland and Townsend have been discharged from hospital to duty.

MENTIONED IN DESPATCHES.

A despatch dated March 1st from Lord Roberts in continuation of a despatch dated Sept. 4th, 1901, is published in the *London Gazette* of June 17th and contains, among others, the following names. The "mentions" bear date Nov. 29th, 1900:—

Lieutenant-Colonel R. V. Kelly, New South Wales Army Medical Corps; Surgeon-Lieutenant-Colonel E. Fiset, Medical Officer Royal Canadian Regiment; Surgeon-Major F. J. Ingolby, West Australian Medical Staff; Captain D. D. Shanahan, R.A.M.C.; Quartermaster and Honorary Lieutenant A. Freshwater, R.A.M.C. (since deceased); Quartermaster and Honorary Lieutenant H. S. Brook, R.A.M.C.; and Quartermaster and Honorary Lieutenant G. F. Short, R.A.M.C.

Civil: Lady Henry Bentinck, Portland Hospital; Lady Furley, Red Cross Depôt, Cape Town; Mr. G. Bonham-Carter, Assistant Commissioner, Red Cross Society; Mr. Donald James Mackintosh, Scottish Red Cross Society; Mr. J. G. Hamilton, Imperial Yeomanry Hospital; Dr. J. Purves Stewart, civil surgeon, Imperial Yeomanry Hospital; Mr. H. Tener Galbraith, civil surgeon, Dundee, Natal; Mrs. Theodosia Bagot, Portland Hospital; Mrs. P. H. Johnston, president, Army Hospital Aid Society, Natal; Mrs. Redpath, colonial nurse, Buluwayo; Mrs. Melina Rorke, colonial nurse, Buluwayo; Miss Frances Amelia Lowrie, matron, Bourke Hospital, Pretoria; and Miss Ada Whiteman, matron, College Hospital, Maritzburg, and Leper Hospital, near Pretoria.

Scottish National Hospital: Surgeon-Captain R. Stirling, 4th Volunteer Battalion the Black Watch (Royal Highlanders); Dr. J. M. Cowan, civil surgeon; Dr. J. Aitken, civil surgeon; nursing sister Miss Margaret Butler Alexander, Queen Alexandra's Imperial Military Nursing Service Reserve; Nursing Sister Miss Annie Henderson, Queen Alexandra's Imperial Military Nursing Service Reserve; and Nursing Sister Miss Mary Ann Forbes, Queen Alexandra's Imperial Military Nursing Service Reserve.

Hospital Ship *Maine*: Major J. Meek, R.A.M.C., G. E. Dodge, civil surgeon; Mr. T. W. Hastings, civil surgeon; Mrs. George Cornwallis-West, Miss Eleanor Charlotte Warrender; Staff-sergeant (now Sergeant-Major) S. J. How, R.A.M.C.; Mr. J. J. Reilly, male nurse; and Mr. W. B. Ruth, male nurse.

Hospital Ship *Princess of Wales:* Major A. H. Morgan, D.S.O., A.M.S. (retired); Captain A. Pearse, R.A.M.C.; Superintendent Miss Clara Mavesyn Chadwick, Queen Alexandra's Imperial Military Nursing Service; Nursing Sister Miss Helen Hogarth, Queen Alexandra's Imperial Military Nursing Service Reserve; Staff-Sergeant W. Higgins, R.A.M.C.; and Lance-Sergeant J. Brown, R.A.M.C.

In a despatch from Lord Kitchener, dated Pretoria, April 8th, 1902, the name of Lieutenant-Colonel J. D. Edge, R.A.M.C., is mentioned.

THE LATE WAR IN SOUTH AFRICA.

Peace has come and has been practically sealed and ratified by the gathering together and the laying down of arms on the part of the various Boer forces lately opposed to us in the field. The news of the surrender of some 17,000 of our late enemy, and still more perhaps of the promising conditions under which this has taken place, has been everywhere received as glad tidings of great joy. If in the past history of the world the saying was ever true that the unexpected is that which happens it has been emphatically so in the case of the late war. Turn which way we will we are met with facts at variance with almost all that was confidently expected or predicted as at any rate most probable. It is impossible even for the most thoughtless to avoid all reflection on the events that have occurred within the past three years. To begin with, the British Government did not expect war and the Kruger ultimatum making it inevitable found this country unprepared for war, whereas the Boers were prepared; and now that peace has come all that was prognosticated about what would be the spirit and conduct of our late enemy has turned out to be as ill-founded as it could well be. The Boers manifest no signs of that depression and humiliation which are supposed to characterise a defeated army. Looking back, as they may well do with great pride, to the part they have played throughout the campaign they now apparently recognise and accept the inevitable and manfully as well as loyally take their place among the subjects of King Edward VII. There are no signs of that bitter and inextinguishable hate and racial animosity which were prophesied would be the case; and the Boer officers and soldiers have been everywhere received with every mark of sympathetic respect, good feeling, and comradeship by the soldiers of the British army. Every Tommy Atkins is now a strong pro-Boer. The war has taught us lessons that were sorely needed, it has been the graveyard of several military reputations, it has revolutionised many of our ideas and military systems, it has enlarged our views and experience of army medical administration, surgery, and medicine, and it has led to a scheme of reform in our army and naval medical services the full effects of which have yet to appear. That our army system generally will be tried and reformed by the results of the experience gained in the late war can scarcely be doubted.

SOUTH AFRICAN CASUALTIES.

We desire to direct the attention of those of our readers who have not yet seen it to an interesting article from "An Actuarial Correspondent" in the *Times* of June 16th on this subject. The article should be referred to and read *in extenso* by those interested in the casualty statistics of the late war. Tables are given of the death-rates per 1000 among officers who have been killed or died from wounds and from disease respectively during the first, second, and third years of the war, and for non-commissioned officers and men for the same years, also calculated at rates of 1000 per annum, of those killed or died from wounds and deaths from disease. From these tables it would appear that, while the men have suffered much less in battle than the officers they have been more subject to disease. The disease-rates of both officers and men are, however, stated to be remarkably low, especially when it is remembered that the ordinary rate of mortality of British troops on foreign service is 15 per 1000 per annum. Comparing one period with another the improvement during the last eight months in South Africa was, moreover, most marked, few more officers and men having, it is stated, died from disease than would have died if no war had been going on. With the exception of the first year's fighting, when the losses both from battle and from disease were very heavy, the casualties in the late war compare favourably with those of most recent campaigns—the Franco-Prussian and American civil wars for example.

BOER AND BRITISH.

Amid the many manifestations of the present mutual good feeling existing between the late belligerents in South Africa which have shown themselves since peace has been declared we may call attention to one of a pathetic nature that occurred recently at Standerton. A Boer officer of the Standerton Commando named Swarts who had died from enteric fever was buried with military honours. The coffin was covered with the Union Jack and carried to the graveside on a gun-carriage. Colonel Batson, the commandant, all the officers of the garrison, and all the garrison followed the *cortége*. General Britz also attended.

DEATHS IN THE SERVICES.

Inspector-General of Hospitals and Fleets William Henry Sloggett, R.N. (retired), at Paignton, Devonshire, on June 10th, in his eighty-second year. He entered the Royal Navy in 1842 and retired with the rank of inspector-general in 1875. The funeral, which took place on June 13th at Paignton, was very largely attended. The deceased gentleman since his retirement had resided at Paignton, where he was highly esteemed.

THE ROYAL ARMY MEDICAL CORPS AND THE CORONATION.

Six officers and 200 non-commissioned officers and men of the Royal Army Medical Corps with 24 horses will take part in the Coronation procession of June 26th and 27th.

It will be seen by a reference to our Parliamentary Intelligence that as there are instances on record of the award of medals to the masters of transport and hospital ships, the War Office is considering whether these precedents should be followed, and, if so, to what extent in the case of masters, officers, and crews of transport and hospital ships employed during the war in South Africa.

Correspondence.

"Audi alteram partem."

THE RELATION OF MENTAL SYMPTOMS TO BODILY DISEASE.

To the Editors of THE LANCET.

SIRS,—There is much in Dr. Nathan Raw's excellent article on "The Relation of Mental Symptoms to Bodily Disease"[1] which provokes comment—mostly laudatory, sometimes critical; but from comment of either kind I could have refrained, had he not in his closing paragraphs violently assaulted one of my most cherished fads. He says of persons suffering from delirium tremens that they are "the most dangerous lunatics for the time and yet they cannot be certified as legally insane." If the Lunacy Act, 1890, were so drawn that the most dangerous lunatics could not be legally certified as insane, it would be a greater legislative failure than even the last Workmen's Compensation Act. But I venture to assert without the slightest hesitation that it is not so drawn. The certifier must state that the patient is a lunatic, an idiot, or a person of unsound mind, and a proper person to be taken charge of and detained under care and treatment. The words of the Act make no reference to the cause of the malady or to its probable duration, and whether the insanity is due to excessive drinking or to other cause, whether it is likely to be temporary or permanent, are not matters which the certifier need take into consideration in order to satisfy the law. They may or may not make a great difference as to the wisdom and policy of certifying the patient, but to the legality of the certificate, if the symptoms are sufficient to warrant the certificate being made, they make no difference whatever. For my own part I should have no hesitation in certifying a patient with delirium tremens if he were sufficiently insane to be certified, and such patients are admitted into lunatic asylums every week without the legality of their certifications being questioned. In one case in which the legality was questioned, the judge explicitly ruled that the causation of the insanity had nothing to do with the matter—that if a man was insane from drink he was as rightly certifiable as if he were insane from any other cause.

Dr. Raw is exercised as to whether it is necessary for a man "to bear the stigma of having been certified as a lunatic when he was simply suffering from temporary mental aberration the result of bodily disease. There can be no question

[1] THE LANCET, June 14th, 1902, p. 1621.

whatever that an asylum of some sort is the best place for the patient, but he need not be certified as insane, at any rate until it is seen whether the insanity is likely to be permanent or not." Dr. Raw is not alive to the practical difficulties of dealing with insane persons without certification. The law which would render an insane person liable to be sent to, and detained in, an asylum, deprived of the control of his person and of the management of his property, without certification, would lay the same liability upon a sane person, and without certification every safeguard of the sacred liberty of the subject would be utterly swept away. I am unable to appreciate the distinction drawn by Dr. Raw between insanity on the one hand and "temporary mental aberration the result of bodily disease" on the other. It is but rarely that we can be quite sure that mental aberration will be of short duration, and even if we could usually do so, and even if we could agree upon the precise duration which is to be termed temporary, there remains the fact, or what I believe to be the fact, that, whether "temporary" or permanent, every manifestation of insanity is the result of bodily disease. With Dr. Raw's conviction that a large number of people are certified as lunatics who are simply suffering from insanity the result of, or associated with, some form of bodily disorder or of poisoning, I should be in complete accordance; but when he contends that such persons are not really insane, I should join issue with him, for I should contend that the "large number" includes every insane person who is certified as such. In short, I deny altogether the existence of Dr. Raw's distinction between mental aberration and insanity. All that I recognise is a difference in degree. Every case of mental aberration or insanity is, in my view, the result of, or associated with, some form of bodily disorder or of poisoning; and I protest with all the vehemence of which I am capable against the view that insanity is a thing apart, a specific entity, having no community of nature with trifling and temporary "aberrations of mind." This view is a lingering remnant of the belief in the demoniacal possession of the insane and is the most serious obstacle to the right understanding of insanity. That it should be held by a man of Dr. Raw's ability and eminence goes far to excuse the otherwise unpardonable length of this communication.

I am, Sirs, yours faithfully,

Catford, S.E., June 16th, 1902. CHARLES MERCIER.

OBSERVATIONS ON DIET.

To the Editors of THE LANCET.

SIRS,—Probably Dr. Harry Campbell's shoulders are sufficiently broad to withstand the onslaught which Dr. F. W. Forbes Ross has thought proper to direct against him in THE LANCET of June 14th, 1902, p. 1724, on the subject of his "highly theoretic and erudite contribution" with reference to the feeding of old people. Nevertheless, as one whose practical experience bears out and confirms Dr. Campbell's views I may be permitted to enter the lists and shiver a lance in the cause of "physiological feeding for the aged"—an expression which, I gather from Dr. Ross's letter, is the same thing as the metabolism of starvation.

I find myself in complete accord with Dr. Ross's observation that "it is quite time we as a profession began to revise our practice and preconceived notions in certain directions where diet is concerned," as also with his clinical experiences, but I take exception to the deductions and generalisations which he draws from the latter. It is in the highest degree improbable that a man living on "the fat of the land" or even on a "generous, good, full diet" (*vide* Dr. Ross's dietetic canons), with lung, kidney, and heart perhaps as the sequelæ of this mass stimulation, would derive any immediate benefit from an ill-considered restriction of diet; indeed, deprived of the mass stimuli to which his metabolism (*pace* Dr. Ross) has been educated and accustomed I should expect the rapid dissolution which Dr. Ross so pathetically deplores. But what is this, after all, other than the phenomena which appear in the alcoholic or morphomaniac when his particular variety of poison stimulus is reduced to a physiological and pharmacopœial dose? I imagine it would not be seriously contended that a full, generous exhibition of either alcohol or morphia would be productive of longevity because when deprived of them suddenly their victims "sink rapidly to dissolution." *Mutatis mutandis*, the argument is, I trust, a sufficient reply to Dr. Ross's *verb. sap.* I am, Sirs, yours faithfully,

London, June 13th, 1902. ERIC PRITCHARD.

To the Editors of THE LANCET.

SIRS,—I have had very considerable experience in dieting the aged during the last 20 years. My experience gained is quite the opposite from Dr. F. W. Forbes Ross's views, expressed in THE LANCET of June 14th, and is more in accord with those of Dr. Harry Campbell if I read correctly what he intends to convey to the reader by the term "spare diet." The aged do not require quantity but quality in their foodstuffs and a full diet is generally harmful to the majority of aged patients. I always prescribe a diet rich in nutrient substance, easy of digestion and assimilation, but spare in quantity. The organs of aged people are more or less worn out, and this refers more particularly to the digestive organs, so that if you tax them with foods which require much digestion and contain a large quantity of waste material fermentation is sure to set in—the very bugbear of old age—which produces most dangerous and unpleasant symptoms.

How many aged gentlemen who dine well but not wisely at their clubs have gone home and died suddenly after a full meal and how many suffer from most painful gouty affections from living on a full diet. Of course, there are many exceptions. My old friend Dr. Pickett's father, who died at the age of 95 years, always used to eat a hearty meal of bread, cheese, and ale before going to bed. My great-grandmother, who lived to 93 years of age, had three full meals a day. We are generally called to diet the feeble and weak, who, I am afraid, form the majority, not the minority, of the aged. The less chance of auto-toxin there is by there being little waste material in the diet the greater will be the success of our treatment. I am, Sirs, yours faithfully,

THOMAS DUTTON.

Manchester-square, W., June 14th, 1902.

SORE-THROAT AS A PREMONITORY SYMPTOM OF ACUTE RHEUMATISM.

To the Editors of THE LANCET.

SIRS,—The association of sore-throat with rheumatism is well known to the profession, but I desire to draw attention to a certain condition of the throat which in not a few cases signals the onset of the graver malady.

I have had under my care two cases which serve the purpose of illustrating my meaning. 1. I was called to attend a married man, aged 34 years, who complained of sore-throat and a marked feeling of general illness. On examination I found the throat red and relaxed but altogether clear of any ulceration or deposit—what might be quite properly and fully described as a catarrhal throat, no swelling of glands or pain about the neck and only little difficulty in swallowing; temperature slightly raised, barely 100° F.; a deposit of lithates in the urine which was otherwise normal, but no pain or discomfort whatever about the body or limbs. So far the case appeared simple enough with this exception—the man seemed to be ill out of all proportion to anything I could discover. The usual treatment was adopted and at the end of five days the patient was to all intents and purposes restored to his usual health and extremely anxious to return to work. I advised him strongly to the contrary; in fact, to remain at home another week as I was not certain of his complete recovery. However, he persisted and went, with the result that in four days' time he was back in bed with a sharp attack of rheumatic fever. 2. This case was very much on all fours with the one described, except that the patient's throat was slightly worse, and that at the end of 10 days he complained of a fixed pain in one heel which was undoubtedly rheumatic. He decided to follow the course I suggested, however, and remained at home, making a good recovery and resuming work at the end of three weeks well and strong and none the worse for his attack.

These two cases which I have described and some few others of a like nature which have come under my notice show at least the possibility of rheumatic fever supervening, the condition of the throat being its initial manifestation. The fact that there is no pain or swelling of joints at the

onset should not mislead us, for in neither of the cases cited did the patients suffer any pain whatever for the first few days; indeed, one actually went to work, the subsequent pain not yet in evidence. All such cases as I have described should be viewed with suspicion, the patient carefully watched and ordered rest and warmth for at least one week, and a further period of seven days in the house with appropriate medicinal treatment, until he is *quite* restored to health and we have no cause for further anxiety. In this way I am sure we might often ward off an attack of acute rheumatism with much subsequent advantage to our patients if with little credit to ourselves.

I am, Sirs, yours faithfully,
D. F. WHITELEY.

Fulham, S.W.

VARICOSE VEINS.

To the Editors of THE LANCET.

SIRS,—I read with interest Mr. Pearce Gould's lecture on Varicose Veins in THE LANCET of March 1st, p. 576, and your comment thereupon in your issue of March 22nd, p. 833, and I expected some critical correspondence to follow. As there has been none as yet perhaps you will admit a few unavoidably belated observations from me.

Mr. Gould says that "two views of the nature of varicose veins are commonly held to-day. One regards them as the result of the yielding of the veins to an increased intravenous pressure due to an obstruction to the flow of blood up to and through the heart. ..... According to the other view, varicose veins are to be regarded rather as venous outgrowths, a superabundant development of venous tissue—venous angeioma." He rejects the former and adopts the latter. But I would venture to suggest that another factor exists which he has overlooked, one so obvious that I have always thought it sufficient, though often combined with pressure, to account for the existence of varicose veins in nearly every case. I mean relaxation of the muscular coats of the veins and hence diminished resistance. Normally the veins are kept duly contracted by the tone of the muscular fibres that the walls possess. But under certain conditions of debility, and in some individuals much more than in others, these fibres become relaxed and the vessels dilated and weak. The chief of these predisposing conditions is temperature; trouble and distress from varicose veins is mainly a seasonal affection, occurring in hot weather. Just as attacks of certain diseases occur punctually and periodically in some patients at certain seasons year after year, so have I been accustomed to find suffering from distended varicose veins on the advent of the hot weather of summer. If one only looks at the back of one's own hand from time to time the conspicuous difference in the size of the veins according to the external temperature will be conspicuous; the veins may be small and almost invisible on a cold day, but large, full, and distended on a hot one. And this applies to all the superficial veins of the body; the deeper ones are better protected and supported. Thus the pressure of blood from gravitation in the lower limbs increases the distension, causing in time permanent dilatation and incompetence of the valves, and then the morbid structural changes of varix result. Is not this a true and sufficient cause? Heat and cold have this effect more or less on the muscular tissue of all superficial blood-vessels, arteries as well as veins. When the wind was in the east Mr. Jarndyce (if I recollect "Bleak House" aright) used to retire to his growlery, owing to the mental depression and irritability due to increased arterial tension brought about by exposure to cold. Some persons are made for warmth, others require a cool atmosphere. Varix is almost always aggravated in the summer. In that season of 1898 in London I saw a woman with extreme varicosity of the veins of both legs who was also advanced in pregnancy. One day a vein burst in each leg simultaneously. Pregnancy certainly has a considerable effect in inducing or increasing the condition. Ovarian and uterine tumours are less potent because their growth is so much slower. Thus I maintain that over-distension of a certain set of relaxed veins by a column of blood is the chief cause; obstruction is a secondary one. Symptoms of pure obstruction are absent because venous circulation is still carried on, especially through the deep veins. Mr. Gould, like others, has met with the disease much more frequently in men than in women, probably because men's occupations compel them to stand about more than women, and on this account men are more liable to become incapacitated and seek relief.

If the angeioma theory favoured by Mr. Gould were the correct one, why is it that varicose veins are always met with in the dependent parts of the body? Why, for instance, do they never occur in the neck or arms? The presence of adventitious muscular tissue in the varicose dilatations is no doubt due to a process of compensatory hypertrophy. The reappearance of veins near the scar after excision of a portion of a vein is doubtless due to the enlargement and growth of small pre-existent veins to take the place of that which has been removed, just as arterial branches enlarge after ligature of a trunk. Therefore the advantages of a surgical operation may be only temporary. The reason why varix does not ensue upon ordinary venous obstruction from cardiac disease is, I believe, that the veins have not become relaxed and thus the pressure falls upon the terminal veins and capillaries, causing œdema.

I am not aware that I am putting forward anything particularly novel in offering the above remarks—in fact I believe that the ideas are old-fashioned and common. They seem, however, to present a satisfactory and intelligible explanation of the condition and thus there seems no need to fly to a more mysterious theory. Mr. Gould will, I know, welcome any honest criticism.

I am, Sirs, yours faithfully,
F. LUCAS BENHAM, M.D., M.R.C.P. Lond.

Exeter, South Australia, May 9th, 1902.

NUTMEG POISONING.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 12th, p. 1034, Mr. R. A. Pitter relates a case of nutmeg poisoning and asks for information as to other cases. Some years ago I was called to see a woman who had taken the whole of a ground nutmeg mixed with gin. The symptoms were exactly the same as those described by Mr. Pitter and the woman nearly died. The dose was taken to procure abortion; whether it had that effect I did not learn. The friends volunteered the remark that the woman had taken the nutmeg in spite of the fact that a neighbour had nearly died from the same cause shortly before. At the time I asked a good many friends, medical and lay, if they knew anything of the poisonous properties of nutmeg in large doses. None of them did except one old lady from the north of England, who stated that she and people in her part knew them well. Squire states that nutmeg in large doses is a narcotic poison.

I am, Sirs, yours faithfully,
Geelong, Victoria, May 13th, 1902. S. MABERLY SMITH.

CHLOROFORM FATALITIES.

To the Editors of THE LANCET.

SIRS,—It seems to me that M. Huchard's statement—as reported by your Paris Correspondent (*vide* THE LANCET, June 7th, p. 1649)—that among 100 deaths under chloroform not more than 10 are concomitant with organic heart disease, ought not to be allowed to pass unchallenged. The St. Bartholomew's Hospital statistical records for the 26 years 1875–1900 contain references to 31 fatalities of this kind, of which some particulars are given as to 30. In 26 of these cases death appeared to have resulted from cardiac failure and from respiratory failure in four. Of the former group of cases it is stated that the heart presented signs of extensive organic disease in nine instances (hypertrophy and dilatation, often with valvular disease, in six, fatty degeneration in three). In only six instances was the heart found to be normal. In 12 cases the condition of the heart is not stated (no post-mortem examination). Thus of 15 cases in which the condition of the heart was actually noted post mortem, in nine this organ was extensively diseased. Hence it may be concluded that morbus cordis adds greatly to the risks of chloroformisation. In five of the foregoing cases the cardiac disease was complicated by extensive pulmonary disease and nine of the patients were in an exceedingly debilitated condition. Most of these fatalities occur during the early stage of chloroformisation while anæsthesia is incomplete (in 11 cases before the operation had been commenced).

I am, Sirs, yours faithfully,
Clifton, Bristol, June 17th, 1902. W. ROGER WILLIAMS.

THE ANNUAL TEMPERANCE BREAKFAST AND THE BRITISH MEDICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged by your kindly allowing me to announce through your columns that the annual breakfast to those members of the British Medical Association who will kindly apply for cards will be given by the National Temperance League on Thursday morning of conference week as usual. I am, Sirs, yours faithfully,

J. T. RAE, Secretary.

Paternoster House, London, E.C., June 17th, 1902.

TEMPORARY REMINISCENCE OF A LONG-FORGOTTEN LANGUAGE DURING THE DELIRIUM OF BRONCHO-PNEUMONIA.

To the Editors of THE LANCET.

SIRS,—With reference to Dr. C. A. Mercier's remarks on Dr. H. Freeborn's case of temporary reminiscence of a long-forgotten language during the delirium of broncho-pneumonia in THE LANCET of June 14th, p. 1685, I should like to say that personally I do not believe in Coleridge's tale of the illiterate maid-servant who talked Greek and Hebrew in her delirium. Indeed, I thought that the tale was known to have been a fabrication. Dr. Leonard Hill in his "Manual of Physiology," p. 379, states that the whole story was a mischievous invention of Coleridge's.—I am, Sirs, yours faithfully,

GEORGE PERNET.

Upper Gloucester-place, N.W., June 28th, 1902.

WHAT IS SCROFULA?

To the Editors of THE LANCET.

SIRS,—Owing to pressure of work I have been unable to reply before this to the letter of Dr. J. Tatham in THE LANCET of May 31st, p. 1560. I am afraid that I can hardly regard his arguments on the retention of the word "scrofula" as convincing. In reply he quotes a paragraph from a System of Medicine which in substance says that "scrofula" may or may not be due to the tubercle bacillus. This is certainly very informing; but against his quotation I may draw attention to the following, taken from the latest edition of Quain's Dictionary: "Scrofula (*scrofa*, a sow), a term applied to a supposed hereditary tendency to slowly progressive chronic inflammations and caseation, especially of lymphatic glands. The large majority of such cases are now known to be instances of chronic local tuberculosis, *and the term is rapidly falling into disuse.*" The italics are mine. This, I venture to suggest, is precisely what is happening—the up-to-date teachers in the medical schools are so instructing medical students that in another generation or so the word "scrofula" will be forgotten. Again, Dr. Tatham alleges as another reason for his retention of the term that "scrofula," as a term, "as distinct from tuberculosis, is in common use by medical men, not a few of whom (including certain physicians and surgeons of eminence) still believe the conditions which these terms imply to be distinct." I cannot help thinking that it would be just as wise to argue that the word "tubercular," expressive of lesions caused by the tubercle bacillus, should be retained because certain physicians and surgeons of eminence and other similar practitioners who know more about "scrofula" than 99 per cent. of the profession use it instead of the universally adopted term "tuberculous." It is noticeable, however, that Dr. Tatham has expunged the word "tubercular" from the list of diseases due to tuberculosis. Lastly, I come to the argument which is, perhaps, the most extraordinary of all. Dr. Tatham thinks that because "scrofula" has figured in the reports of the Registrar-General from their commencement therefore the term should still be retained "lest the comparability of figures in a series of years should be impaired"—that is to say, by affording the opportunity of filling in death certificates with the term "scrofula" he will enable a few members of the profession to satisfy their pathological consciences and thus imperil the accuracy of his reports. However, even in the present state of our knowledge it does not require a prophet to forecast what the record for deaths from "scrofula" will ultimately become. Presumably in 10 years' time we shall have some enterprising journalist, on the prowl for new "copy," contributing a paper to a magazine with the comforting title of "The remarkable decline in the mortality from 'scrofula' based upon the statistics of the Registrar-General." I am, Sirs, yours faithfully,

June 17th, 1902. PES.

THE OPEN-AIR TREATMENT OF PULMONARY PHTHISIS.

To the Editors of THE LANCET.

SIRS,—The following testimony to the good effect of open air and mountain air in phthisis, quoted from the late Geo. F. Buxton's "Adventures in Mexico and the Rocky Mountains" (Murray, 1849, p. 288), may interest some of your readers:—

"My two companions had left the United States the preceding year, having been recommended to try the effect of change of climate on a severe pulmonary disease under which both laboured. Indeed, they were both apparently in a rapid consumption and their medical advisers had given up any hope of seeing them restored to health. They had remained in the mountains during one of the severest winters ever known, had lived upon game, and frequently suffered the privations attendant upon a mountain life, and now were returning perfectly restored and in robust health and spirits. It is an extraordinary fact that the air of the mountains has a wonderfully restorative effect upon constitutions enfeebled by pulmonary disease, and of my own knowledge I could mention a hundred instances where persons whose cases have been pronounced by eminent practitioners as perfectly hopeless have been restored to comparatively sound health by a sojourn in the pure and bracing air of the Rocky Mountains, and are now alive to testify to the effects of the invigorating climate. ..... The elevation above the level of the sea of the plains at the foot of the mountain is about four thousand feet, while the mountain valley of the Bayon Salado must reach an elevation of at least eight or nine thousand and Pike's Peak has been estimated to exceed twelve thousand." I am, Sirs, yours faithfully,

June 16th, 1902. F. L. B.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Decline of the Plague Epidemic.—The All-India Victoria Memorial.—Results of the Census.—A Case of Medico-Legal Interest.—Legislation against Indians in Natal.

THE plague epidemic is rapidly declining throughout India. For the past week there have been 5498 deaths reported as against 7008 for the previous seven days. The Punjab, which is chiefly affected, reports 4234 deaths, being a decline of 1219.

The All-India Victoria Memorial Fund has now reached the large amount of Rs. 4,500,000, equivalent to about £300,000.

The census tables show a great variation in population in certain districts. While there has been an increase of over 335,000 people in Sind there has been a decline of over 650,000 in Bombay. Bengal, Madras, Burmah, and the Punjab make up for the 10,000,000 increase in the British provinces. Aden has been practically stationary. It is in the Native States that the effects of famine and immigration are most apparent. Rajputana has lost 2,250,000 of its inhabitants, the Central India Agency over 1,500,000, and the Bombay native states over 1,000,000. Baroda, Gwalior, and Hyderabad have all lost considerably. An explanation is wanted for the much larger decreases in native territory.

A case of considerable interest from a medico-legal point of view is reported by the chemical examiner to the Bengal Government. A murder was committed at the Bengal Club in Calcutta and examination of the blood-stains on the garments of the murderer showed that the blood contained filariæ. This established a connexion between the murderer and his victim and it indicated, moreover, that the murder had been committed at night.

The proposed legislation against British Indians in Natal seems oppressive. Every male will be liable to pay a tax on reaching the age of 16 years, even though he was born in the

colony, and every female at the age of 13 years. This will bear very hardly upon the heads of families, because children can with difficulty pay £3 a year.

May 31st.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Ventilation of Public Buildings.

THE ventilation of our public buildings is often notoriously bad, but people are so accustomed to it that they take it as being in accordance with natural law. Manchester is probably no worse than other towns, for the proper supply of fresh air to, and the removal of foul air from, buildings of all kinds are problems not solved by our architects and engineers. If anyone wishes for an object-lesson let him go to the gallery of the Free Trade Hall when one of the Hallé concerts is half over. The city coroner thinks the Minshull-street coroner's court supplies a good illustration and it has, indeed, long been the subject of much complaint. He referred to the matter when holding an inquest last week and expressed the hope that now that a city architect was appointed he "would direct his attention to the ventilation of public buildings, a matter which had been much neglected." He thought that where juries had to sit for a long time they had a right to demand that they should have fresh air. Mr. D. Walmsley, inspector of factories, who was in court, said that "he had never experienced a worse condition of ventilation than he had done that day," and that if the court were a factory "somebody would be convicted for overcrowding." When used for public purposes public buildings are for the time being almost always overcrowded and the difficulty is to provide sufficient interchange of air in a bearable fashion to meet this abnormal state of things. The problem is difficult, but the evil is great and the remedy for it is deserving the best efforts of the most able.

Heywood and Sanitation.

At the meeting of the Heywood Town Council on June 12th several matters of interest were brought forward. The chairman referred to the annual report of the medical officer of health and drew attention to the fact that of 70 children who had died from diarrhœa 50 were "bottle-fed." The ignorance, want of correct ideas as to cleanliness, and very often the apathy and indifference, of those who have charge of the children whose mothers are many of them working in the mills are sufficient to account for much of our infant mortality. Little can be hoped for the present generation from the teaching in our elementary schools, but the kindly educational influence of ladies of tact, sympathy, and good sense, as shown by the successful working of the Manchester Ladies Health Society, may do much to bring about a reduction of the high infant death-rate and the brightening of the homes of the working class. It cannot but be thought that some of the energy and restlessness which sends young ladies to flood the ranks of the nurses might with advantage be directed to the mitigation of the conditions so fatal to the infants of our town populations. But perhaps the uniform would be missed. Heywood is also engaged in several public schemes for which the Local Government Board has sanctioned the borrowing of £28,292—£4538 for a refuse destructor and the remainder for sewerage works. The health committee has taken action with the view of putting a stop to the practice by some of the butchers of "blowing" their meat, each butcher having been served with a notice.

Coöperative Convalescent Home.

The local coöperative societies propose to establish a convalescent home for their members at Norbreck on the Lancashire coast, two miles north of Blackpool. It is to accommodate 120 persons with space for future extension and is estimated to cost at least £25,000. This movement seems to be general among the coöperative societies, for the northern section now has a home of its own at Gilsland in Cumberland, while the midland and southern sections are discussing the question of making similar provision for the benefit of their members.

Drunkenness among Women.

It is sometimes made an occasion of reproach that the clergy do not make as much use of their position and opportunities to help forward sanitary work as they might do—that they are so much engrossed with their spiritual work that they are heedless of the body which the spirit inhabits. This may sometimes be so, but the Bishop of Manchester, in a recent visitation address to the Bolton Rural Deanery, did not lay himself open to this charge. He introduced a discussion as to whether there was sufficient authority in Bolton to prevent overcrowding, as to whether they were trying to make the drains good, to abolish back-to-back houses, and to put the courts into a thoroughly sanitary condition. He drew attention to the fact, revealed by returns which he had received, that while intemperance among men was diminishing it was unhappily increasing among women. "If that should go on," he said, and quite truly, "it was the death knell of our race." He spoke strongly on the subject. "They must make an end of this hideous thing. It was a matter of life and death for them." If necessary he would make it penal to supply a woman either in a public-house or shop "with the means of brutalising herself." No surer means of lowering our position in the scale of nations both physically and morally could be devised than by increasing the temptations and fostering the taste for drink among our women of all classes, and, though the bishop did not mention it, the grocers' licences minister to both and might well be repealed.

Struggle with a Madman.

Dr. W. A. Smith of Darwen had an unpleasant experience on Sunday evening. A man went into his surgery and seized Dr. Smith by the throat, when a violent struggle occurred and fortunately the man was overpowered. The police were sent for and he was taken to the police-station and committed to the Blackburn Workhouse Infirmary for 14 days for medical examination. It was fortunate for the doctor that he was able to treat his patient successfully.

June 17th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Important Movement in Northumberland and Durham.

IN order to raise the general and financial status of the medical profession in the counties of Northumberland and Durham two associations—viz., the Northumberland and Newcastle Medical Association and the County of Durham Medical Union—were formed some time ago. The former association has now a membership of close on 200, while the latter has almost 250 members. With a view to strengthen the two associations against possible offenders it was agreed that the presidents of both should approach the consultants of the district to ascertain whether they would be prepared to refuse to meet those practitioners whom the councils should judge to be offenders against the objects of the associations. For this purpose a meeting of the consultants was held on June 11th in the library of the Royal Infirmary, Newcastle, Dr. E. Jepson, President of the County of Durham Medical Union, being in the chair. Dr. Jepson having explained the object of the meeting Dr. G. H. Hume pointed out that the councils of the associations were asking the consultants to assist in the punishment of these offenders without the consultants having any voice in the judgment of the cases against them. That, Dr. Hume said, was a position which the consultants would not accept, but he thought that if a small committee were appointed, on which the consultants had proper representation, to inquire into and to adjudicate on all such cases a solution of the difficulty might be arrived at. After some discussion, during which several consultants spoke in eulogistic terms of the proposal, it was finally agreed, subject to the approval of the two associations, and on the motion of Dr. Hume, seconded by Mr. J. Rutherford Morison :—

That a committee be formed to investigate and decide upon cases of alleged unprofessional conduct which shall be referred to such committee by the council of either association.

Mr. Rutherford Morison then proposed and Dr. A. M. Martin seconded :—

That the committee for the investigation of cases of alleged unprofessional conduct shall consist of the presidents of the two associations, two consultants (to be appointed by the consultants of the district), and two members from each of the associations.

These two motions were passed unanimously and have since been adopted by the joint council of the two associations. Dr. J. H. Hunter of South Shields and Dr. R. S.

Hubbersty of Sunderland were nominated as the representatives of the County of Durham Medical Union; Dr. W. L. Ruxton of Newcastle and Dr. W. S. Campbell of Whitley, Northumberland, were nominated as the representatives of the Northumberland and Newcastle Medical Association; the consultants have not yet nominated their representatives. On account of the formation of this "judicial committee" the councils of the two associations will in future act as grand juries to select the more serious cases for investigation and judgment by the "judicial committee."

June 17th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Infirmary.

ONE of the rules regulating the admission of in-patients to the Cardiff Infirmary provides that such persons only shall be admitted as are unable to pay for medical attendance and support during their illness, though cases of accident or emergency may be admitted without any regard to the circumstances of the patient. As there appears to have been some abuse of this rule the secretary of the infirmary has sent a circular letter to the medical practitioners of Cardiff pointing out that there are in the town several private hospitals in which patients who ought not to be admitted to a charitable institution can be treated. With regard to the treatment of out-patients a rule of the institution establishes a wage-limit for applicants of 18*s.* per week for single men or women, 23*s.* per week for a man and wife, and 2*s.* per week for each child. Any person found upon investigation to be earning more than these sums may be refused attention or may be referred to the provident dispensary.

Small-pox.

The outbreak of small-pox at Swansea shows signs of declining. Until June 14th, when two patients were removed to the hospital, there had been no case reported for nearly a fortnight. Since the beginning of the epidemic in December there have been 71 cases and 14 deaths have occurred. One case at Chester and two at Ystalyfera have been traced to infection in Swansea. In a recent report the medical officer of health (Mr. Ebenezer Davies) states that no death had occurred at the small-pox hospital after successful revaccination. During the month of May 135 contacts were kept under observation and 85 were revaccinated.—A man was fined £10 on June 12th at the Swansea police-court for obstructing the execution of a magistrate's order requiring his child, who was suffering from small-pox, to be removed to the small-pox hospital. The facts of the case have already been alluded to in THE LANCET.[1] It was contended by the defendant that the children, for there were two who were ill, were perfectly isolated and could not be a danger to other persons in the house notwithstanding the fact that there were subsequently attacked with the disease the maid-servant, the children's mother, their aunt, and a child living next door.—A Greek sailor was removed to the Barry Small-pox Hospital on June 14th from a ship which had arrived from Sligo three days previously.—The two small-pox patients have been discharged from the Aberdare Hospital and the town is now free from the disease.

The Workmen's Compensation Act.

An important decision was given in the Court of Appeal on June 11th, when the Master of the Rolls upheld the judgment of the Aberdare county-court judge who had made an award in favour of a collier under the Workmen's Compensation Act, 1897, under the following circumstances. In the course of his work some coal trucks slipped back upon the collier and though he worked for a few days it was subsequently found that he was ruptured, but when being operated upon at the hospital a hernia of old standing was discovered and the colliery company from whom compensation was claimed contended that but for the prior lesion there would have been no further injury. A contrary opinion, as already indicated, was held by the local judge and by the Master of the Rolls.

Vaccination Questions.

The anxiety which is being displayed by boards of guardians in various parts of England and Wales to limit the services of the public vaccinator to the poorer classes will in some quarters be used as an argument in favour of transferring the administration of the Vaccination Acts from the Poor-law authority to the sanitary authority. In a recent report upon the subject the medical officer of health of Cardiff (Dr. Edward Walford) says that he has every reason to believe that the Cardiff board of guardians carries out the Vaccination Acts in a conscientious manner, but he is of opinion that the reasons which in 1840 decided Parliament to place the administration of the Acts in the hands of the boards of guardians no longer exist, for the matters connected with the prevention of disease are now under the jurisdiction of another and distinct authority which does not, however, control the most important measure connected with the prevention of small-pox. Dr. Walford states that at the time of the Gloucester epidemic he endeavoured unsuccessfully to prevail upon the Cardiff board to appoint temporarily additional vaccination officers with a view to discovering evasions of the Vaccination Acts and to induce adults to be revaccinated, and he was obliged, therefore, to instruct the sanitary inspectors to make special inquiries as to the condition of vaccination at houses visited by them and to forward the results of their inquiries to the vaccination officers.

The Destruction of Rats on Board Ship.

A demonstration was lately given at Cardiff of the Clayton apparatus for destroying rats on board ship and for disinfecting purposes. Sulphur dioxide gas (SO_2) and, it is claimed, also a small quantity of the higher oxide (SO_3) were forced into the bottom of a vessel's hold which had a capacity of 200,000 cubic feet; the foul air displaced by the gas was exhausted through a pipe communicating with the hold almost flush with the deck and conveyed to a furnace having a temperature of about 600° F. Rats in cages at the bottom of the hold died almost immediately after exposure to the gas and others placed about six feet below the level of the deck were found dead within three hours of exposure. To test the germicidal action Dr. W. G. Savage of the Cardiff and County Public Health Laboratory placed in the hold liquid cultures, soaked in strips of fabric, of the bacteria of plague, cholera, typhoid fever, and anthrax, and of staphylococcus pyogenes aureus. Three separate pieces of fabric were used for each variety of micro-organism and subsequent investigation showed that all the plague, cholera, and typhoid fever bacilli were killed, but that none of the anthrax cultures were affected and one of the staphylococci cultures remained alive. These results are similar to those arrived at by Klein, Houston, and Gordon in the London County Council experiments.

The Covering of Meat during Transit.

Among the by-laws made by the Glamorganshire County Council for "the good rule and government" of the county is one which requires that meat shall be well-covered over when being conveyed from one part of the county to another. On June 9th a man was fined 5*s.* at the Ton police-court for contravening this by-law which the stipendiary magistrate stated ought to be strictly enforced.

Death of Mr. Henry Marcus Kemmis, L.R.C.P. Irel., M.R.C.S. Eng., J.P.

Through the death from pneumonia on June 12th of Mr. Henry Marcus Kemmis the medical profession in Bridgwater has lost one of its oldest and most respected members. Mr. Kemmis had practised in Bridgwater for a quarter of a century and at the time of his death was one of the honorary surgeons to the Bridgwater Infirmary and medical officer to the workhouse. He was on the commission of the peace for the borough and was an enthusiastic volunteer, holding the rank of brigade-surgeon-lieutenant-colonel in the Severn Volunteer Infantry Brigade.

The Okehampton (Devon) Board of Guardians and Revaccination.

At the meeting of the Okehampton board of guardians held on June 7th the clerk read the list of those persons in the union who had been revaccinated at the expense of the ratepayers. A gentleman sent a cheque for 7*s.* 6*d.* to the guardians, being the fee for revaccination. He stated in his letter "that he was quite unaware by being revaccinated he had gone on the rates." One of the guardians said that he considered that a fuss was being made about nothing, as the Local Government Board Order distinctly stated that persons could be revaccinated at the public expense. After some discussion upon the fees for revaccination it was decided to inform the public vaccinators that they should ask persons

[1] THE LANCET, May 24th, 1902, p. 1501.

applying for revaccination whether they wished it performed at the public expense or otherwise.

Vaccination in the West of England.

At the meeting of the Helston board of guardians held on June 9th the finance committee recommended that all the old vaccination stations should be made stations for revaccination purposes, also that revaccination should be carried out only on receipt of seven days' notice from the clerk that the guardians considered it expedient, and that a fee of 3*s.* 6*d.* should be paid for all cases of revaccination at all stations. The guardians decided to adopt the recommendations.

Oysters and Enteric Fever.

At the last meeting of the East Kerrier (Cornwall) District Council a letter was read from the Local Government Board stating that "the Board were informed that the liability of the oyster-beds in the Penryn river to contamination by sewage is well known to the local sanitary authorities in whose jurisdiction the river is situated, but the Board do not understand those authorities have taken any united action in dealing with the sewage discharged in the river and it does not appear that they have brought pressure to bear on the local oyster merchants to remove their 'market layings' to some locality free from danger. Consequently the Local Government Board will bring the whole of the matter specially to the notice of the Royal Commission on Sewage Disposal." The members of the council decided to take no action.

The Bristol General Hospital.

A fête and gymkhana, which was unfortunately held in unfavourable weather, took place at the Zoological Gardens, Clifton, on June 12th, 13th, 14th, and 16th, in aid of the funds of the Bristol General Hospital.—Lady Smyth of Ashton Court has given £1500 to the Bristol General Hospital, to be devoted to the endowment of a bed in memory of her late husband, Sir Greville Smyth.

June 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The late Dr. Barry of Limerick.

AN action for £5000 damages in compensation for the death of the late Dr. Robert Barry of Limerick was recently brought by his widow and, after being tried before the Lord Chief Justice of Ireland and a special jury of the city of Dublin, resulted on June 16th in a verdict for the plaintiff for £3000. Dr. Barry, who died as alleged from an injury caused by the carelessness of one of the servants of Messrs. Spaight and Co., was a graduate and M.D. of the Royal University of Ireland and a Fellow of the Royal College of Surgeons in Ireland. He was well known and much respected in the city of Limerick.

Death of Mr. James Picken, L.R.C.P. & S. Edin.

I regret to announce the death of Mr. James Picken at his residence, Hazelbank, Randalstown, co. Antrim, which occurred on June 9th. For many years Mr. Picken had been dispensary medical officer of the Toomebridge district, but owing to delicate health he retired a few years ago from practice. A faithful physician, extremely kind to the poor, Mr. Picken secured the confidence of all those who found it necessary to have his professional advice. He leaves a widow and three sons to mourn his death.

Tyrone and Fermanagh Asylum.

At the monthly meeting of the committee of management of this asylum held on June 12th Dr. P. O'Doherty (Dublin) was appointed assistant medical officer at a salary of £125 per annum, with the usual allowances.

The Antrim Infirmary, Lisburn.

Dr. W. Calwell (Belfast) has been appointed consulting physician and Dr. Cecil E. Shaw (Belfast) consulting ophthalmic surgeon to the County Antrim Infirmary, Lisburn.

Ulster Medical Society.

The annual meeting of the members of the Ulster Medical Society was held in the Belfast Museum on the evening of June 12th when, after the reports of the treasurer, librarian, pathological secretaries, and council had been received, the members proceeded to consider the rules of the society which had been revised by a special committee in consequence of the gift of a new medical institute by the president, Professor W. Whitla. These rules, with a few verbal alterations, were passed and the donor of the new institute, Professor Whitla, read the trust deed and nominated seven trustees, all members of the society, in whom the property of the institute is to be vested and who will be *ex-officio* members of the council. The following office-bearers were then elected by the members themselves for the session 1902–1903:—President: Dr. John Campbell. Vice-Presidents: Dr. S. Agnew (Lurgan) and Dr. J. J. Austin. Secretary: Dr. Thomas Houston. Treasurer: Dr. W. B. McQuitty. Pathological Secretary: Professor J. L. Smith. Librarian: Dr. R. R. L. Leathem. Council: Dr. J. S. Morrow, Professor J. W. Byers, Dr. A. Gardner Robb, Dr. J. Colville, Dr. W. D. Donnan (Holywood), and Dr. J. B. Moore.

The Royal Commission on Irish University Education.

The Royal Commission on Irish University Education sat in Dublin during last week and heard evidence from numerous witnesses and amongst these were the Provost of Trinity College, Dublin. It is rumoured now that it is found impossible to leave Trinity College outside the purview of the Commission. At a meeting of the Royal University Graduates' Association held in Belfast on June 10th very strong resolutions were passed in reference to the treatment meted out to Mr. F. H. O'Donnell, M.A., by the Commission. It is stated that when he appeared to give evidence on May 22nd, in reply to a tardy request by the Commission, no attempt was made to elicit evidence by any of the Commissioners, notwithstanding that his book on the "Ruin of Irish Education" had been received by the Commission and that he had furnished a summary of the evidence he intended to give. The council of the Graduates' Association says that it is forced to the conclusion that there was some extraordinary influence hostile to a full hearing of the facts and to their official record in the blue-book. It is said now that no final report will be ready before October.

Small-pox in Belfast.

Both amusement and indignation are felt in Belfast at the publication of a very exaggerated and alarming report in the London *Daily Mail* of June 14th, headed "Small-pox panic," "Extraordinary terror and boycott at Belfast." The facts about the small-pox outbreak are these. The first case occurred in Belfast Gaol on March 13th and was the case of a man who brought the disease from Glasgow; the next was the case of a woman who contracted the disease in Liverpool from where she returned to Belfast. Both these patients were placed in the Union Hospital, Belfast, and within the hospital surroundings itself 17 cases have since developed, and within the last 10 days there has been no fresh case in the hospital. The inmates of the workhouse have been revaccinated and the most vigorous measures have been taken in the way of disinfection and observation. While this has been going on in the workhouse only four cases of small-pox (two of these were in a street adjacent to the workhouse) have arisen in the city of Belfast, the population of which is 350,000. These figures show that the report about a small-pox epidemic in Belfast has been greatly magnified. The statements in the *Daily Mail* are not only grossly exaggerated but they are positively harmful, as if not contradicted they will lead to a boycott of tourist traffic this season in Belfast and the north of Ireland.

The late Dr. William Thomson of Anahilt.

An appeal has been drawn up and circulated on behalf of the widow and family of the late Dr. Thomson of Anahilt, co. Down, who have found themselves deprived of their only means of support. Owing to his district being a poor one Dr. Thomson was unable to make any provision for his family. Dr. J. G. Jefferson, Lisburn, is treasurer of the fund.

Unveiling of a Mural Tablet erected in Memory of the late Professor Stephen O'Sullivan at the Cork North Infirmary.

The unveiling of a mural tablet erected to the memory of the late Professor O'Sullivan by the staff of the Cork North Infirmary took place in presence of a number of distinguished citizens in the main hall of the Infirmary. Mr. D. D. Donovan, senior physician, in a very interesting speech, mentioned that Professor O'Sullivan had been 40 years connected with the hospital. He referred to Professor O'Sullivan's distinguished career as a surgeon and the unselfish manner in which he

had often devoted many hours daily to the services of the hospital where his great experience was always at the disposal of his colleagues. Professor C. Y. Pearson in a few words endorsed all that had been so well said by Mr. Donovan. The Rev. Mr. Wilson, one of the governors of the hospital, also bore testimony to the invaluable services rendered to the hospital by the late Professor O'Sullivan and eulogised Professor O'Sullivan's unvarying kindness to the poor. The City High Sheriff (Mr. Augustine Roche) then unveiled the tablet and Dr. J. Cotter, honorary secretary to the staff, read the inscription. The High Sheriff stated that it was a melancholy pleasure to him to take part in that ceremonial as he was well aware of Professor O'Sullivan's merits as a surgeon, and he personally knew that Professor O'Sullivan's great ability and experience were always available for the poor amongst whom he had laboured so long and so well. On the conclusion of the High Sheriff's sympathetic speech the proceedings terminated.

June 18th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Affairs at the Faculty of Medicine.

CERTAIN grave incidents occurring at the Faculty of Medicine have been much discussed since June 7th. Dr. Pupin, the secretary, who has held that post for 20 years, has been suspended, together with the cashier, M. Imoville, who has had charge of the accounts for 25 years. Of course, there was much talk about embezzlement, malversation, and the like, but the facts of the case as obtained from information received at the Faculty are as follows. For many years M. Imoville had been weak enough to make his subordinates advances on the security of their salaries. He was the more easily able to do this from the fact that certain of the professors who were often away or who were in no way pressed for money, used frequently to let their salaries remain unclaimed for some time. But the unhappy cashier fell a victim to his wish to be obliging. Many to whom he had advanced money forgot to pay him and some left the place altogether while still owing him the money advanced. Matters went from bad to worse and so last year, finding himself altogether cornered, he went to the secretary, whose goodness and readiness to serve anyone are proverbial in the Faculty and who is adored by all his staff. To him M. Imoville told the whole story, whereupon Dr. Pupin made the mistake of not immediately communicating with the dean, thus endeavouring to save the unhappy M. Imoville by giving him time to make good the deficit bit by bit. This, however, was but lost labour, for when M. Debove became aware of the deficit and wished to know the exact state of affairs the cat was soon out of the bag. M. Debove at once communicated with the Minister concerned and the cashier and the secretary, his responsible chief, were at once suspended. A searching inquiry is being held and M. Griset, chief clerk of the Education Department, has been appointed secretary of the Faculty in the room of Dr. Pupin.

The Hospitals Nursing Staff.

M. Mourier, the director of the Assistance Publique, has recently laid before the Municipal Council a scheme dealing with the hospitals which it is proposed to pull down and to rebuild,[1] together with certain proposals concerning the nursing staff. It is certain that the position of the staff of the Paris hospitals (other than the medical staff) is deplorable. The nurses have to work for 14 or 15 hours a day and then have a short rest in a badly appointed dormitory. This state of matters, of course, reacts most injuriously on the patients. M. Mourier proposes to substitute female nurses in place of male nurses and he also wishes to divide the non-medical staff into two categories, the first to comprise the nurses proper and the second the staff of cooks, laundry-workers, and the like. This innovation will excite great interest, for it is evident that persons who are compelled to turn suddenly from cooking, scrubbing, and washing to the more delicate work of the care of sick cannot of necessity do their work in accordance with the notions of modern asepticism. All the medical staff will, of course, welcome the proposed change. As to the question of the supply of nurses it is proposed to substitute one training-school for those at present existing at the Salpêtrière, Bicêtre, the Pitié, and Lariboisière hospitals. At this school would-be nurses will be trained for two years before serving as nurses in a hospital. A committee nominated by the Assistance Publique is examining into this scheme which, it is estimated, will cost some 200,000 francs annually. This seems a large sum but it must be remembered that there are 5465 members of the honorary medical staff to be dealt with.

[1] THE LANCET, May 10th, 1902, p. 1363.

Alopecia of Dental Origin.

At the meeting of the Society of Dermatology and syphilography held on June 5th M. Jacquet showed a patient who had been attacked by alopecia areata after having suffered from bilateral facial neuralgia. M. Jacquet had treated the alopecia without success and eventually discovered that his patient had three carious molars. A dentist was called in and he extracted two teeth and filled a third. Three days later the neuralgia which had lasted for one year had quite disappeared. 12 days later the patches of alopecia which were perfectly bare were covered with hair. M. Galippe, without wishing to criticise the theory proposed by M. Jacquet as to the dental origin of alopecia, reminded the meeting that so far no dentist appeared to have been struck by the coincidence of alopecia with dental lesions. For his own part he had never seen a case. M. Du Castel related the case of a lady who had consulted him about two patches of alopecia on the nape of her neck. A short time previous to their appearance she had had a tooth filled and the dentist had omitted to place a clean napkin under her head. She considered that she had caught the infection from the head rest. Now was this a case of contagion or was the alopecia the consequence of the dental operation? M. Brocq related a case in support of M. Jacquet's contention. It was that of a little girl who had come under his care some two months ago for alopecia. During the first three weeks of her treatment nothing was done to her mouth and the patches of alopecia markedly increased. Now, however, her teeth were being carefully attended to, and while no new patches had developed the original patches had lessened in size.

June 16th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

A Medical Council for Canada.

DR. T. G. RODDICK'S Bill has received the sanction of both Houses of the Canadian Parliament. When the Bill was before the Senate an important amendment was proposed and carried which provides that no province should be represented in the council either by elected or appointed members until after the said Act had been adopted by the legislature of the province and had thereby accepted the registration under this board with the provincial board in lieu of the registration with the provincial board. Provision was also made for provinces withdrawing from the council. An additional clause was appended which provided that the Act should not interfere as conveying any power to open medical schools or give medical education. These arrangements were subsequently concurred in by the House of Commons. Dr. Roddick well deserves the thanks of the Canadian profession for having carried this Bill through Parliament single-handed.

Montreal Foundling Hospital.

According to the annual report of the medical superintendent of the Montreal Foundling Hospital, 32 infants were in the institution on May 15th, 1901. During the past official year 159 were admitted, making a total of 191 for the year, an increase of 22 over the figures of the preceding year. The deaths numbered 112. The treasurer reported that the total receipts for the year amounted to $6538, and the expenditure to $4799.

Medical Item from Labrador.

Dr. Wilfred Grenfell, the English physician who is devoting his life to the amelioration of the fishermen of Labrador, writes to a friend in Montreal stating that at the present time there is great destitution prevalent among the inhabitants. The work of this medical missionary ranges from treating a compound fracture to making a pair of boots from the skin of a freshly killed seal. In summer Dr. Grenfell makes his trips along the coast in the hospital ship *Strathcona*,

while in winter time his tours are made on dog sleighs. He has recently established at St. Anthony on the north French shore the third hospital since he began work in that land several years ago.

Montreal Dispensary.

The fifty-second annual meeting of the Montreal Dispensary was held in that city recently and the secretary's report for the committee of management shows that during the past official year the applicants for treatment numbered 16,675, as follows: Roman Catholics, 11,643; Protestants, 4004; other creeds, mostly Jewish, 1028. Medically classified they were as follows: medical and surgical, 8505; eye and ear, 2069; women's diseases, 1725; nose and throat, 912; skin diseases, 1983; children, 1327; and dentistry, 154. The report stated that while 75 per cent. of the poor who received the benefits of the dispensary were Roman Catholics comparatively few of that creed subscribed to the institution.

Interesting Medico-legal Case.

A medico-legal case of some interest to the profession in the province of Ontario has recently been before the courts at St. Thomas. The action was brought by Mrs. Duncombe, widow of the late Mr. Truman W. Duncombe, L.R.C.P. Edin., against the Mutual Life Insurance Company of New York, who had refused payment of a $5000 policy on the ground of "fraud." Mr. Duncombe was a well-known practitioner of Western Ontario, a gentleman 40 years of age, and a medical examiner for the defendant company. He already held several policies in the company when he made the application on July 11th, 1901, for an additional $5000 policy. He filled in his own medical examination paper and got a brother practitioner to sign it who had examined and passed him previously for another company. After some hesitation the company accepted this policy although the examination had not been made by one of their own examiners. On Oct. 2nd in the same year Mr. Duncombe died suddenly and although the company paid all his other claims they refused to pay this one for the reason above mentioned; hence the action. The case hinged on the point whether Mr. Duncombe knew at the time that he wrote out his own examination paper that he was not in good health. It was clearly shown that he had not been examined by his brother practitioner on the date set forth in the examination form. No necropsy had been held after death, but the embalmer had noticed a swelling to the left side of the lower part of the sternum. He had drawn off one and three quarter pints of dark red blood which was clear and which clotted in the bottle. Under these circumstances the medical experts considered that death most probably had been due to rupture of a thoracic aneurysm and that the condition must have been present before Mr. Duncombe had made application for the insurance. The case was dismissed with costs.

The Public Health of Montreal.

The report of the Hygienic Committee of Montreal, for 1900, which has just been issued, deals with some interesting matters. As regards vaccination it shows that there were 6990 vaccinations performed during 1900, 48 only of which were reported as having been done by family physicians. The others were the work of three public vaccinators and of that number 30 per cent. were primary vaccinations. During the year there were 2802 cases of contagious diseases, as follows: diphtheria, 523; scarlet fever, 1107; typhoid fever, 647; and small-pox, 24. The births for the year were as follows: males, 4986; and females, 4906. 2240 marriages were solemnised. Of the 5287 deaths among the French Canadians in the city 3299 were those of children under five years of age; amongst the other Catholics 444 of the deaths were those of children under five years of age. Amongst the Protestants 307 deaths of children under five years of age took place. 55·95 per cent. of the total mortality in the city took place among children under five years of age, and 44·05 per cent. among children above five years of age.

Montreal Physicians Honoured.

A short time ago a complimentary banquet was given by the medical profession in Montreal to three of the oldest and most distinguished physicians of that city—namely, Dr. Rottot, dean of Laval Medical College; Dr. D. C. McCallum, emeritus professor in the Faculty of Medicine at McGill University; and Sir William Hingston, professor of clinical surgery at Laval. The occasion was the celebration of their golden jubilee in the ranks of medicine. Dr. Rottot was admitted in 1847 a graduate of the old Montreal College of Medicine which later became the Victoria and now is the Medical Faculty of Laval; Dr. McCallum was graduated from McGill University in 1850 and for many years held the Chair of Obstetrics; and Sir William Hingston was a graduate in 1851 and has devoted himself almost entirely to surgery of late years. He has been mayor of Montreal and is a member of the Canadian Senate. Over 150 physicians of the city attended the banquet to do honour to these gentlemen.

University Intelligence.

Dr. Bovey, dean of the Faculty of Applied Science at McGill University, has been made a Fellow of the Royal Society of Great Britain. Dr. Bovey came to McGill University in 1872 as professor of civil engineering and applied mechanics. In the following year a department of applied science was instituted of which Dr. Bovey became dean. He has been dean ever since that time and under his able management the faculty has increased by leaps and bounds until to-day few science faculties in the world surpass it.—Dr. James Stewart of Montreal has been elected President of the Association of American Physicians at the annual meeting held recently at Philadelphia. Dr. Stewart is professor of medicine and of clinical medicine at McGill University. He is also physician to the Royal Victoria Hospital, Montreal.—Dr. G. P. Girdwood has tendered his resignation of the chair of Chemistry in the Faculty of Medicine at McGill University. This has been accepted and Dr. Girdwood has been appointed emeritus professor in the Faculty of Medicine. He was appointed professor of practical chemistry at McGill University in 1872 and of chemistry in 1879. He was one of the original Fellows of the Royal Society of Canada.—Dr. Wyatt Johnston has been appointed professor of hygiene in the Medical Faculty of McGill University in succession to Dr. Craik who has resigned.—Sir James Grant, M.D., Ottawa, has been elected President of the Royal Society of Canada. The annual meeting of the society was held recently at Toronto University.

Toronto, June 3rd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Manila.

THE outbreak of cholera in Manila which commenced in the middle of March still continues, although there are signs that the epidemic is on the wane. The fatalities from the disease have been nearly wholly confined to the native population; a few Europeans, however, have been stricken and have succumbed. The origin of the outbreak is attributed by the United States chief quarantine officer of the Philippines, Passed-Assistant-Surgeon J. C. Perry, to vegetables brought from Canton. Cholera is said to have existed in Canton for some time before its presence was reported and during this period the Canton vegetables were allowed to be landed in Manila. Manila is the greatest vegetable market of the Orient, as nothing of that character is produced in the Philippines. All such supplies have to be imported and all green vegetables, such as cabbage, celery, lettuce, and cauliflower, have come from the Canton districts. As soon as cholera was diagnosed with certainty the Board of Health of Manila took steps to combat the disease and to curtail its spread. Large detention camps and an elaborate system of inspection were rigidly carried out. Cases of cholera were sent to cholera hospitals and all contacts and suspects were immediately removed to the detention camps, the infected house being at once disinfected, closed, and placed under guard. A cordon was immediately thrown round the city, ferry-boats and passenger trams were stopped, and all passengers going to the neighbouring provinces, either by rail or small boat, were required to secure a permit from the board of health. All the drinking-water from whatever source was strictly supervised and all green vegetables in the city and markets that were considered as liable to convey the disease were bought and destroyed. The city was also quarantined against the provinces.

New York Board of Health and Soft Coal.

The general strike in the anthracite coal regions has resulted in an extreme scarcity and consequent high price of hard coal in New York city. Many of the large business houses, hotels, and apartment houses of New York for the sake of economy have been burning for the past week bituminous coal which has had an unpleasant effect on the

atmosphere. Dr. Lederle, the present head of the New York Health Department, has taken cognisance of the matter and has sent out a large number of inspectors to locate the establishments whence the soft-coal smoke proceeds. Section 134 of the Sanitary Code makes it a civil offence for a householder to allow smoke other than white or cinders, dust, gas, or any offensive odour to come from his chimney. "Notice will be sent to all persons guilty of the offence to discontinue the use of soft coal within five days and in aggravated cases within 24 hours. If the notices are not heeded they will be prosecuted under the afore-mentioned section of the code on a civil charge and in case of the smoke blowing into neighbouring windows the offenders will be held on a criminal charge."

Retirement of Surgeon-General Sternberg.

Surgeon-General Sternberg will shortly be retired for age from the command of the medical department of the United States Army. It is proposed that Dr. Sternberg shall be retired with the rank and pay of major-general. A Bill to that effect has been favourably reported to the United States Senate by the Committee on Military Affairs. The *American Journal of Military Surgery*, referring to General Sternberg's retirement, says, "The practical and potentially entire extirpation of yellow fever is but one of many scientific and humanitarian acts, rendered possible by his devotion to duty in its broadest and highest sense. With executive capacity of the soundest type, his administration of the enormous business affairs of his office has been characterised by exceptional sagacity and skill, while the military phases of his command have continued to progress with cumulative advantage to the service. General Sternberg's incumbency of the surgeon-generalcy, indeed, has been continuously marked by lofty aims and results so beneficial to the army and to the country that his promotion to the grade of major-general prior to his retirement for age would be but a slight recognition of his worth."

Suicide in Chicago.

Chicago has always borne a somewhat evil reputation as a city given over to a wearing, rushing, nerve-straining existence and consequently its inhabitants have been esteemed a short-lived race. It now appears that such is not the case, and the bulletin of the Chicago Health Department for the week ending May 24th shows that, on the contrary, Chicago is an exceptionally healthy city and that with the exception of a remarkable tendency to suicide exhibited by its population the metropolis of the West compares favourably in the matter of health with any city of the United States. Deaths by violence have greatly decreased and there has been a decrease of 6·7 in cases of homicide and manslaughter. Railway and street-car accidents have also considerably diminished in number. The sole blot on this fair picture is the increasing frequency of suicides in Chicago. From 1880–90 inclusive there were 1272 suicides out of 7898 cases of death by violence and there have been 166 cases of suicide since Jan. 1st of this year, an increase of 10 per cent. over the number for the corresponding period of 1901. The Health Department of Chicago some time ago attributed this suicidal tendency to influenza and in the bulletin referred to reiterates the belief in the following words: "The relation, as cause and effect, of influenza and suicide is clearly demonstrated by a further study of the figures. The fourth great epidemic of influenza in this country began in December, 1889, since which time Chicago has never been entirely free from its infection." Influenza has a peculiarly potent effect upon the nervous system and undoubtedly predisposes its subjects to various forms of brain affections from melancholia to suicidal impulse. It has often been remarked before that influenza is frequently followed by almost uncontrollable suicidal tendencies, and the Chicago Health Department is probably right in ascribing to this cause the increase of suicide in that city.

American Congress on Tuberculosis.

This congress opened at the Hotel Majestic, New York City, on June 2nd and lasted for three days. The most important papers, probably, were those read by Dr. H. Edwin Lewis, secretary to the committee, and by Dr. Adami, professor of pathology in McGill University, Montreal, on the Intercommunicability of Human and Bovine Tuberculosis and the Menace to the Public Health of Impure Milk. Dr. Lewis protested against the extreme importance attributed to bacilli in the causation of consumption and argued that efforts are too much directed towards the extinction of the micro-organisms and too little attention is paid to the patient. He then went on to give his views as to the relation of metabolism to human susceptibility. Dr. Adami in reference to the danger arising from the consumption of impure milk by children, said: "As a point upon which we are in absolute agreement it may be set down that under ordinary conditions tuberculosis of domestic animals does not develop by reason of infection from human beings suffering from the disease. The infection is from animal to animal. ..... Is the existence of tuberculosis among livestock a menace to the farming industry in this country? Undoubtedly it is, and that not so much because here in America the herds are already very extensively affected as because of its great tendency to spread. ..... It cannot be too strongly emphasised in connexion with impure milk that our danger lies in its liability to set up gastro-enteritis in those drinking it, or, in plainer words, acute digestive disturbances, especially in young children. ..... I do not know if you appreciate the terrible mortality—one far exceeding that from tuberculosis however produced—which there is among children from six months to one year, a mortality which can only be put down to the consumption of milk which is crowded with acid-producing putrefactive germs."

June 9th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

THE bubonic plague continues its course in Sydney and Brisbane at about the same rate. Every week several cases occur; last week, for instance, in Sydney seven cases were reported; one patient died and four were discharged from hospital, where 32 remain. In Brisbane three or four cases occur weekly. No cases have been reported from the other states. A curious development has taken place in Sydney where the animals at the Zoological Gardens have been severely attacked by plague, especially the kangaroos and wallabies; since April 3rd 19 animals and two birds have died. It is supposed that the disease spread to them by the medium of fleas from plague-infected rats. This is the first known infection of marsupials with bubonic plague. The gardens have been closed and all the premises in which the animals are housed have been cleansed and disinfected. One of the difficulties in dealing with the plague in Sydney is the existence of old sewers, laid down in early days, the plans of which have been lost. Most of them are in disuse but at low levels and consequently full of filth. All, moreover, act as nurseries for rats, and the Mayor of Sydney stated recently his opinion that the plague will never be stamped out till these old sewers are abolished. But, as is usually the case in "board-ridden Sydney," there is conflict of opinion as to whether action should be taken by the city council, the Water and Sewerage Board, or the Public Works Department of the Government.

Friendly Societies and Medical Contracts.

A conference was recently held between delegates from the friendly societies in the western suburbs of Sydney and from the Western Suburbs Medical Association to consider a proposal to have one uniform medical contract in use in all lodges in the district. A draft contract was submitted and discussed and a copy sent to each lodge for consideration of its members, after which a second conference will be held.

Hospital Affairs.

The "imbroglio at the Women's Hospital," Melbourne, to quote the newspaper headings, is slowly resolving itself. The committee declined to re-instate the dismissed resident medical officers and called for applications. Only one was received, from Mrs. Martell, M.B., a former resident, who was appointed. Then another difficulty arose. Dr. Muir, the resident medical officer in the infirmary department of the hospital, declined to relieve Dr. Martell and to obey the rule of the hospital that only one of the responsible officers of the hospital shall be absent at a time, saying that it had never previously been enforced and was regarded as obsolete. It is understood that a compromise is being arranged but no applications have been sent in for the position of junior medical officer to the midwifery department.—At the Melbourne Hospital the accounts for the first quarter of the year show a deficiency of over £800. The committee states that if expense is to be further reduced it can only be done by closing some of the wards, although

the accommodation is not at present nearly sufficient to meet the demands made on it. It is suggested that more should be contributed by the municipalities. Dr. J. W. Barrett has been appointed consulting oculist and Dr. W. K. Hughes consulting aurist to the hospital. Plans have been prepared for the new sanatorium for consumptives to be erected at Wentworth, New South Wales. The buildings provide for 20 patients in three pavilions and two night-room cottages. The sanatorium is to be completed in five months. 24 applications have been received for the position of resident medical officer, at a salary of £300 per annum, with board and residence; of these, none were from Australia, 15 were from Great Britain, four from Germany, four from the United States, and one from Fiji.

Nurses' Examinations.

A conference was recently held of representatives from the Melbourne Hospital, Alfred Hospital, Melbourne Children's Hospital, and Victorian Trained Nurses' Association to arrange for a uniform standard of instruction and examination for nurses and the appointment of a conjoint board of examiners in the final subject of nursing. The proposals were agreed to and it was decided that the committees of the three hospitals represented should nominate a member of the honorary medical staff and the Nurses' Association, two medical men to form the conjoint board. Dr. Thomas Cherry, lecturer on bacteriology at the Melbourne University, has been appointed bacteriologist and scientific daily expert to the Agricultural Department of Victoria. He is to receive a salary of £600 a year and travelling expenses. He will continue to control the bacteriological laboratory at the University, but a demonstrator and assistant lecturer will be appointed to assist in the university teaching.

Obituary.

Dr. William Snowball, who died on April 22nd, was the first in Victoria to make the study and treatment of children's disease a specialism. He had a marked personality and was a capable and exceedingly successful practitioner. He was born in Carlton, a suburb of Melbourne, where he passed the greater part of his life and was only 47 years of age at his death. On leaving the Church of England Grammar School he entered the Medical School of the Melbourne University, where he passed his final examination for the M.B. degree before the statutory age of 21 years and had to wait some time before graduating in 1875. He subsequently visited Europe and studied more especially the diseases of children, and on his return he entered on that close association with the Melbourne Hospital for Sick Children which lasted till his death. When he was first appointed resident medical officer the hospital was a small affair conducted in a private house and the staff consisted of general practitioners. Very largely as the result of Dr. Snowball's indefatigable efforts the hospital extended its operations and the specialism became more and more defined. At the same time Dr. Snowball himself became the acknowledged authority on children's diseases in Australia and had an immense and lucrative practice. He was a man of great natural sympathy, tact, and intuition, that enabled him to manage his little patients with marked success. He was an omnivorous reader of all kinds of literature and very catholic in his tastes. One of his greatest pleasures was to help his younger brethren in the profession, and during his whole career the Children's Hospital was always first in his thoughts, and his large private practice was never allowed to interfere with his attendance at the hospital.—The late Robert Denham Pinnock, M.D.Glasg., who died suddenly while on a shooting excursion, was for many years the leading medical practitioner in Ballarat. He was born near Melbourne in 1849, was educated in that city, but graduated as M.D. at Glasgow. He settled in Ballarat on his return to Victoria and soon established a large and lucrative practice. He was for years on the honorary staff of the Ballarat Hospital and was a capable surgeon, though conducting a general practice. He took a prominent interest in public affairs, was a vice-president of the school of mines, and a member of the council of the art gallery. For many years he held a commission in the militia. He was extremely popular both with the profession and the public and will be a great loss to Ballarat.—Dr. Sydney Henry Schrader of Waverley, New South Wales, died on March 26th after a protracted illness at the early age of 36 years. He was a native of New South Wales and the son of a medical man. He studied medicine in the University of California, U.S.A., where he took his M.D. degree in 1893. He commenced practice in Narrabri in partnership with Dr. Henry and seven years ago moved to Waverley where he had an extensive practice. He held the rank of captain in the Royal Army Medical Corps and was attached to the Engineers. He was also an enthusiastic supporter of the game of bowls. He left a widow but no children.

May 8th.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At examinations for medical and surgical degrees, Easter term, the following candidates were successful:—

SECOND EXAMINATION.

Part I., Pharmaceutical Chemistry.—H. E. T. Dawes, St. John's; G. B. Fleming, King's; H. A. Hancock, non-collegiate; V. C. Honeybourne and R. McC. Linnell, St. John's; C. H. Rippmann, B.A., King's; H. A. Smith, B.A., H. Selwyn; F. J. Thornton, Caius; and D. R. P. Walther, Pembroke.

THIRD EXAMINATION (NEW REGULATIONS).

Part I., Pharmacology and General Pathology.—H. C. Cameron, B.A., St. John's; H. M. Clarke, B.A., Clare; E. R. T. Clarkson, M.A., H. Selwyn; R. P. Cockin, B.A., Caius; H. Dodson, B.A., Downing; W. G. P. Ellis, M.A., Catharine; H. Falk, B.A., King's; H. J. Fardon, B.A., Christ's; G. R. Footner, B.A., Pembroke; B. Gardner, B.A., Caius; C. B. Goulden, B.A., Non-Collegiate; F. W. Goyder, B.A., and J. R. C. Greenlees, B.A., St. John's; G. H. Harper-Smith, B.A., Caius; C. King, B.A., Trinity; G. H. K. Macalister, B.A., and O. V. Payne, B.A., St. John's; W. H. Robinson, B.A., Downing; C. T. Y. Robson, M.A., St. John's; E. W. Sheaf, B.A., Downing; and G. C. E. Simpson and G. A. Ticehurst, B.A., St. John's.

FREEMASONRY.—*Rahere Lodge, No 2546.*—The installation meeting of this Lodge was held in the Great Hall of St. Bartholomew's Hospital (kindly lent for the occasion by the treasurer and almoners) on June 10th. Mr. John C. Baker, M.B. Lond., and Mr. Wilfrid H. W. Attlee, M.B. Cantab., were initiated into Freemasonry and Bros. Cross, Griffith, and Drysdale were elected members of the Standing Committee. W. Bro. Phineas S. Abraham, M.D. Dub., the outgoing W.M., installed his successor, Bro. George H. R. Holden, M.D. Cantab., as W.M. for the ensuing year. W. Bro. Holden then invested as his officers: W. Bro. Ernest Clarke, F.R.C.S. Eng., S.W.; W. Bro. J. H. Gilbertson, P.P.G.D. Herts, J.W.; W. Bro. the Rev. Sir Borradaile Savory, Bart., P.G.C., Chaplain; W. Bro. Clement Godson, P.G.D., M.D. Aberd., Treasurer; W. Bro. D'Arcy Power, P.G.D., F.R.C.S. Eng., Secretary; Bro. H. J. Waring, F.R.C.S. Eng., S.D.; W. Bro. W. Haig Brodie, P.P.G.D. Surrey, M.D. Edin., J.D.; W. Bro. F. Swinford Edwards, P.M., F.R.C.S. Eng., Director of Ceremonies; Bro. J. H. Drysdale, Assistant Director of Ceremonies; Bro. G. H. Robinson, Mus. Bac., Organist; Bro. H. W. C. Austen, M.D. Lond., I.G.; Bro. M. J. Anderson, Steward; and Bro. W. H. Cross, Bro. C. H. Cosens, Bro. M. L. Trechmann, F.R.C.S. Eng., and Bro. S. R. Scott, Assistant Stewards. The lodge passed a resolution approving of the formation of a Royal Arch Chapter of the Hospital Lodges to be affiliated to the Rahere Lodge and appointed W. Bros. Holden and D'Arcy Power to serve as representatives on a sub-committee to carry the proposal into effect. A Past-Master's jewel was unanimously awarded to W. Bro. Abraham for his services to the Lodge during his year of office and presented by W. Bro. Holden. W. Bro. Abraham, in reply, expressed his sincere thanks. The report of the audit committee was received and adopted. It showed that the financial position of the Lodge was satisfactory and that the sum given away in charity during the past year amounted to £60 18s. A grant of £5 was unanimously voted as a first instalment for the benefit of a brother in distress. The brethren subsequently proceeded to Frascati's Restaurant where the banquet was held. The attendance was a large one and a most enjoyable evening was spent, an excellent entertainment being provided by Bro. Walter Churcher, Bro. Astley Weaver, and others.

FEEBLE-MINDED CHILDREN AND THE LONDON SCHOOL BOARD.—At the weekly meeting of the London School Board on June 12th it was decided on the recommendation of the General Purposes Committee to appoint Mrs. F. M. D. Berry, M.D., B.S. Lond., as assistant (lady) medical officer, under the direction of the medical officer, at a salary of £250 per annum. Dr. Berry will be employed in the work of the medical officer's department, but chiefly in connexion with the examination of children requiring special instruction—viz., feeble-minded, crippled,

blind, or deaf—and to examine all female teachers and officers in the board's service and candidates for appointment by the board.

THE DANGERS OF NICOTINE: PROSECUTION BY THE PHARMACEUTICAL SOCIETY.—At the Kingston-on-Thames County Bench on June 12th Joseph Hutchinson, seed and artificial manure merchant, appeared to answer three summonses for selling a poisonous vegetable alkaloid known as nicotine without having his name and address on the bottle, for selling the poison to an unknown person, and for failing to make an entry of the sale in a book kept for the purpose, contrary to the provisions of the Pharmacy Act, 1868. Mr. Vaughan Williams, in opening the case, said that the poison the defendant was charged with selling was contained in a compound known as "The XL All Vaporiser Fumigator," used for the destruction of insects in greenhouses, which was made up of a number of various kinds of poisons, but a two-ounce bottle contained sufficient nicotine to poison hundreds of persons.—Harry Moon, clerk to the Registrar of the Pharmaceutical Society, stated that there was a label on the bottle containing the following: "Tobacco is generally considered to have somewhat poisonous properties, and the juice of tobacco which collects in the stem of a pipe is well known to be poisonous. This compound contains the concentrated nicotine of tobacco and should be kept in a safe place and out of the reach of children."—Mr. Dobbs, addressing the magistrates for the defence, urged that an article of this kind which was sold for trade and technical purposes had been held to be exempt from the provisions of the Pharmacy Act. If it were not so the businesses of many tradesmen would be ruined and it would be vesting a monopoly in poisons in the hands of chemists, a thing that the Legislature never contemplated.—The magistrates having conferred in private the chairman said they considered the case proved and the defendant would be fined £2 on each of the three summonses, including costs. The bench consented to state a special case for the Court of Appeal.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Midwives Bill.

THE Midwives Bill has now passed through all its stages in the House of Commons and will not be seen again there unless the House of Lords makes some alterations in it. In that event it will be for the House of Commons to signify its approval or disapproval of the changes. In the House of Lords the measure will still be regarded as a private Member's Bill, but there can be no difficulty in finding time for its discussion. It was formally introduced on Monday, June 16th, and put down in the name of the Duke of Northumberland for second reading on Friday, June 20th.

The Sale of Butterine.

The Bill introduced by Mr. Hanbury with reference to the sale of butterine extends to this article the margarine clauses of the Sale of Food and Drugs Act of 1899 with certain exceptions. For instance, it does not propose that the restriction upon the amount of butter fat in margarine shall apply to butterine and it says that the wrapper containing the butterine shall have a label indicating that the butter has been adulterated or impoverished and approximately to what extent.

HOUSE OF COMMONS.

WEDNESDAY, JUNE 11TH.

Scotland and the Conscientious Objector.

Mr. WEIR asked the Lord Advocate if the Secretary for Scotland would consider the expediency of introducing legislation such as would admit of the Conscience Clause in the Vaccination Act of 1898 being extended to Scotland.—The LORD ADVOCATE replied: The Secretary for Scotland sees no reason for introducing legislation of the kind suggested by the honourable Member and cannot undertake to do so.

Sanitary Accommodation in Factories and Workshops.

Mr. TENNANT asked the Home Secretary whether he had yet issued an order setting forth a standard of sanitary accommodation in factories and workshops; and, if so, whether he could lay it upon the table of the House.—Mr. RITCHIE said: The consideration of this matter has necessitated a great deal of inquiry, but the chief inspector has now submitted his proposals, and although one or two points still require consideration I hope to be able to publish the draft order shortly.

The Use of Alcohol in Manufactures.

During the committee stage a clause was inserted in the Finance Bill enabling the Commissioners of Inland Revenue to exempt from duty after consideration of the circumstances of each case pure alcohol used in manufactures. The clause was brought forward by Mr. HALDANE who explained that owing to the duty manufacturers in this country were placed at a great disadvantage in their competition with foreign manufacturers. He instanced the case of manufacturers of explosives and of drugs and perfumery. Nearly all the chloral used in this country had, he said, to be made abroad, whilst the export duty of chloroform made the cost of landing it in Australia to the British manufacturer double the cost to the German manufacturer. In the same way on account of the duty on pure alcohol much valuable research work had to be done abroad. With the clause in operation all this trouble might be obviated.

THURSDAY, JUNE 12TH.

Fees for Vaccination Exemption Certificates.

Mr. SPENCER asked the Attorney-General whether his attention had been called to the variety of practice as to the charging of fees for a certificate of exemption from compulsory vaccination and as to the doubts which exist as to the payment of such fees and whether he could suggest any method for abolishing such fees.—Mr. RITCHIE replied to the question saying: It is true that the fees referred to vary in different places; but so also, and to a greater extent, do other fees similarly fixed by tables prepared by local authorities. When the tables are submitted for the approval of the Secretary of State every effort is made to secure uniformity, but his power does not extend to enforcing it. I am not aware of any doubt as to the power of the local authorities to fix such fees. But I may say that the Northamptonshire Standing Joint Committee have recently submitted to me a table from which it would appear that they do not desire that such fees should be charged within their jurisdiction. The matter is receiving consideration.

Scotch Parish Councils and their Medical Officers.

Mr. WEIR asked the Lord Advocate if the Secretary for Scotland would consider the expediency of recommending parish councils throughout the Highland crofting counties, by means of circular or otherwise, to make arrangements such as would admit of parochial medical officers obtaining an annual holiday as in other parts of the United Kingdom.—The LORD ADVOCATE: I am informed that this subject was considered by the Local Government Board in 1900 and that their views are fully stated in their report for that year at page 25. The Board do not propose to do more than is there stated.

FRIDAY, JUNE 13TH.

Cremation Bill.

This Bill was considered on report and was afterwards read a third time. It has already passed through the House of Lords.

TUESDAY, JUNE 17TH.

London Water Bill.

Mr. LONG, in reply to a question as to the further procedure on the London Water Bill, said that on the return of the measure from the Joint Committee it would be considered in Committee of the whole House and would subsequently be treated as a public Bill. He could not at present say when the Bill would be taken.

Proposed Medal for Hospital Ship Crews.

Mr. FORSTER asked the Secretary of State for War whether a medal issued to commemorate any war or warlike operations had ever been granted to the masters and officers of transports or hospital ships; and, if so, whether, in view of the great services rendered to the country by the masters, officers, and crews of the transports and hospital ships during the war in South Africa, it was intended to grant to them the South African medal.—Mr. BRODRICK replied: There are precedents for the award of medals to the masters of transports and hospital ships in a few exceptional cases. The question as to whether these precedents should be followed to any, and, if so, to what extent in the case of the masters, officers, and crews of transports and hospital ships employed during the war in South Africa is at present under consideration, and I am not as yet in a position to make a statement on the subject.

Hours of Women in the Fruit Preserving Trade.

Mr. TALBOT asked the Home Secretary whether he would reconsider the Order issued by his authority for fruit preserving under the Factory and Workshop Act, 1901, with a view of preventing the undue employment of adult women for excessive hours under Article 5 of the Order, and extending the exception given by Article 6 of the Order to young persons under 18 instead of only to those under 16 years of age.—Mr. RITCHIE replied: I think the Draft Order goes as far as it is safe to go at present. After a year or two of experience of its working it may be possible to make a further advance; but even if I were satisfied that the honourable Member's suggestions were practicable I should hesitate to adopt them now at the cost of delaying for 40 days the bringing into operation of the new Order.

WEDNESDAY, JUNE 18TH.

Prison Medical Officers and their Duties.

Mr. CONDON asked the Chief Secretary to the Lord Lieutenant of Ireland whether Mr. Corr, now a prisoner in Clonmel Gaol, under the Criminal Law and Procedure (Ireland) Act, applied on May 16th to the medical officer of the gaol for an hour's additional exercise on the ground of ill-health caused by continued confinement in his cell; whether the doctor replied that he was a bail prisoner and could leave when he liked, and that if he were in another class it would be a different matter; whether the governor told the doctor that Mr. Corr could not leave as he was undergoing another sentence running concurrently with the bail sentence; whether the doctor refused the application; whether Mr. Corr is still in solitary confinement; and whether medical officers of prisons were entitled under the prison rules to differentiate in their treatment of prisoners, whether bail or otherwise.—Mr. WYNDHAM replied: The application made by the prisoner on the 17th (not the 16th) May was not made on the ground of ill-health. He complained of the confinement but stated that he was in good health, a statement with which the medical officer concurred. The doctor observed that it would be desirable to give bail if he required greater freedom as, unless on medical grounds, he could not interfere with prison rules. The doctor has no recollection of making a reference to his being in another class. The reply to the third query is in the affirmative. In reply to the fourth query, the doctor did not recommend an extension of exercise, inasmuch as he was unable to do so on medical grounds. The prisoner is in solitary confinement only in the sense that he occupies, like all other prisoners, a separate cell. He is exercised in association with other prisoners of his class in the open air for two

hours daily. In reply to the concluding inquiry medical officers are not so authorised except on medical grounds.

THE MIDWIVES BILL.

THIRD READING DEBATE: FULL REPORT.

ON Friday, June 13th, two hours of the time of the House of Commons were devoted to a debate on the motion for the third reading of the Midwives Bill. Before the debate began the opening sentence of the first clause was amended so as to make it clear that the Act as a whole will come into operation on Jan. 1st, 1905, and the penalty provision on Jan. 1st, 1910.

Mr. GRIFFITH BOSCAWEN said that while he did not intend to oppose the third reading he thought the Bill was so exceptional in its character that he could not allow it to pass without a few words. The Bill was contrary to the whole course of legislation on these questions. For many years past Parliament had endeavoured to strengthen the law against what he might call quack or inferior practitioners. In the present state of the Medical Acts no medical practitioner could practise midwifery unless he had qualified, not only in that subject, but also in medicine and surgery. Now this Bill entirely reversed that policy. Instead of making the qualification more strict it made it far more easy. It enabled people to practise who were only qualified in midwifery and he was afraid that in many cases their qualification would not be very high. He quite recognised that there were special reasons why this course should be adopted. In the first place, although the law laid down these high qualifications for medical men, the fact remained that in practice the great bulk of the poorer classes did not resort in ordinary cases of labour to the medical profession but to midwives. Many of these women were ignorant, untrained, unregistered, and unregulated, and had been the cause of much suffering and mortality which was preventable. He apprehended that the reason why the poorer classes did not avail themselves of the services of medical men was that they could not afford to pay the charges, but he must point out that unless the amendment inserted during the report stage had been inserted the Bill would have been perfectly useless, because the unqualified and untaught practitioner would have been allowed to continue her practice and, just as now, the poorer classes would have gone to her instead of to the qualified person. Had the Bill passed in its original form the unregistered woman would have been preferred to the registered woman because of the cheaper charge of the former and thus the evil complained of would have continued. He admitted this and it was because of the acceptance of the amendment that he had withdrawn his opposition to the Bill. There had been strong objections pressed against this provision to prevent after Jan. 1st, 1910, uncertified women practising habitually and for gain and he had heard sinister rumours that attempts might be made to remove it when the Bill reached another place. He knew that the Home Secretary spoke most strongly against it and that he felt most strongly against it and he told the House that for his part he could not accept the amendment. He had thought a great deal about the speech of the Home Secretary and he failed to understand his objection. The right hon. gentleman said that the amendment would prevent not merely the unregistered woman from nursing in a midwifery case but from watching the other children, cleaning the house, and performing other menial duties for a friend. He (Mr. Griffith Boscawen) could not see how that would follow. The words of the amendments were "habitually and for gain attend women in childbirth." What, therefore, was contemplated was the actual nursing and attending the women in the course of labour. If the words were not sufficiently clear they could be amended so that there should be no risk of interference with menial duties such as the Home Secretary had described.

Mr. JESSE COLLINGS: Who is to pay?

Mr. GRIFFITH BOSCAWEN: The person who employs the woman must pay her.

Mr. JESSE COLLINGS: And he an agricultural labourer.

Mr. GRIFFITH BOSCAWEN said that if the right hon. gentleman suggested that the agricultural labourer could not pay for this assistance the Bill was of no use. He confessed that he should have liked to see the Central Midwives Board made a stronger body and he also thought that the local control ought to be stronger. He, however, did not oppose the Bill. At the same time it was a peculiar Bill and ought not to be taken as a precedent.

Mr. RENSHAW said that he could not agree with the views expressed by the hon. Member. His fear was that the amendment which had been introduced would cause great difficulty in many rural parts of the country. He believed there were many places where it would be perfectly impossible without great expense to bring a trained midwife to attend cases of labour. This ought to be considered, and he thought that if any words approaching those introduced in the Bill were to be maintained they ought to be modified in the direction of making it possible to put some charge upon a public rate so that hardship might not be involved. There was another point to which he wished to refer. The hon. Member for the Scotland Division of Liverpool (Mr. T. P. O'Connor) had succeeded in getting on the Central Midwives Board a representative of the Royal British Nurses' Association. He congratulated him on his success and he wished to make an appeal for a representative of the Queen Victoria Jubilee Institute for Nurses. This institute was doing excellent work in every part of the country and he thought was entitled to a representative. As the secretary informed him in a letter, the institute was engaged in supervising midwives all over the country and was constantly training them; it had on its roll at present between 400 and 500 midwives.

Mr. ERNEST FLOWER joined in this appeal.

Dr. THOMPSON said that there was no doubt whatever that the medical profession generally throughout the country was not at all satisfied with this Bill, but as medical men knew the great interest the hon. Member (Mr. Heywood Johnstone) had taken in the matter they had waived a great many of their objections, hoping that the discussion which had taken place might in the near future lead to an amending Bill. In Ireland they had almost as perfect a system of looking after lying-in women as was possible. They had well-arranged dispensary districts and in each district a medical man with a midwife under him. The midwife could not act herself. The woman who was about to be confined got a line and went to the medical man and the latter sent a midwife to look after the patient. The medical man was in touch with the case and if the midwife saw anything wrong she sent for the medical man who came and did all he could for the patient. He held that poor people had a right to this assistance. He was not quite sure that the Government were at all in favour of the very necessary amendment which had been introduced during the report stage. He had heard the Under Secretary for Home Affairs say that it would be a terrible thing to deprive poor people of the help of these handy women in their time of trouble. Had the right hon. gentlemen ever heard of antiseptic treatment? The very thing which they wished to guard these poor people from was dirt and he held that the very last thing that these handy women should do was to clean the house.

Mr. JESSE COLLINGS: But who is to pay for it?

Dr. THOMPSON said that if they established a proper system of dispensary districts as in Ireland there would be no trouble about the paying because the cost would be put upon the rates. He could testify to the danger that arose from the employment of these handy women from their ignorance and carelessness and dirty habits. There were many defects in this Bill but still there were some good things in it and he thought he might say this for the medical profession that they were not a money-grubbing profession. When they saw suffering medical men never hesitated to relieve it, regardless of any consideration of payment. There was no profession which did more gratuitous work. There was no medical man in the three kingdoms who would not support him when he said that the amendment which had been introduced was absolutely necessary in the interests of the poor and his earnest hope was that the amendment would be retained.

Mr. PARKER SMITH said he did not think that the last speaker had said a word too much about the unselfish work of the medical profession. Everyone wished that poor women should in their time of trouble get the very best skill, but how was it to be got? They had to look the facts in the face and they found that only a small proportion of these women were able to afford the assistance of members of the medical profession. Then it was admitted that an enormous amount of mischief was done by the ignorance and dirty habits of midwives. This Bill was an endeavour to do as much as could be done in the way of improving the state and the education of midwives. They must proceed gradually. He wished they could go further than this Bill and he should be delighted if he thought it possible to go further and insist upon higher qualifications, but he was of opinion that any attempt to make the thing too stringent, to demand too elaborate qualifications, would simply be to make the thing impossible and unworkable. He hoped that in the future they would be able to make a further advance. In his opinion this Bill was a real step forward and would improve the quality of the ordinary midwife up and down the country. An hon. Member (Mr. Griffith Boscawen) had said that the Bill was contrary to the tendency of the law. He should have said that it was exactly in accordance with the law which was to restrict quacks and other unqualified professors of medicine. The law in other respects had not been to forbid unauthorised practice because it had been felt generally that that was perfectly impossible; it had been to register those who were qualified and to take every precaution that those who were not qualified should not pretend that they were. The law could not stop them from practising altogether. The law could not prevent him from taking advice from anyone in regard to his health or anything else, and from paying if he was so inclined, but the law could make sure that he did so knowing well that he was going to someone not recognised by the faculty. After this had been done everyone must be left to form his own judgment. He should like to stop quacks very much but he was afraid that a Bill to that effect would not have very much chance of passing through this House. He cordially supported the amendment which had been introduced and he would be no party to any attempt to get it taken out of the Bill in another place. He believed that during the interval of seven years many of the women now in practice would be able to acquire the knowledge and experience necessary for admission to the roll of midwives. As a suggestion he thought provision might be made for the admission to the roll of women of good character who were engaged in practice in 1910. What he thought about members of the medical profession was that sometimes they had been rather impracticable in asking too much all at once and taking the line that because they could not get all they wanted they would take nothing at all. At the same time he believed that all through they had been actuated by the highest motives.

Sir WALTER FOSTER said that the present position was a somewhat difficult one. They met a week ago with seven pages of amendments to this Bill on the notice paper and with hardly any prospect apparently of the stage being completed at that sitting. Then suddenly and almost unexpectedly they were all in harmony with reference to the Bill and the Bill passed rapidly through the report stage and was now before them for third reading. He hoped that the change made in the Bill would be maintained at all costs. Last week they did not receive any explicit declaration from the Government of their adhesion to the new principle introduced into the Bill. On the contrary, the Under Secretary for the Home Department made a speech of considerable fervour defending the position of the unqualified practice of midwifery in rural districts. With that defence he had a considerable amount of sympathy. He thought, however, that the fears of the right hon. gentleman were exaggerated because under the Bill women in practice who were of good character would be able to go under the roll of midwives and so be able to carry on their calling without difficulty. The right hon. gentleman was very properly indignant with reference to the terms applied to some of these women. They had been called dirty but not in the ordinary sense. The term had been used in the purely scientific sense. All that was wanted was that ignorant and untrained persons should not in the future be allowed to perform one of the most delicate and responsible functions which a woman could be called upon to perform for one of her sisters. He wished to elicit from the right hon. gentleman a pledge that whatever changes might be made in the Bill at all events the words "habitually and for gain attend women in childbirth" should not be interfered with because the whole compromise, or so-called compromise, of last week hung upon the insertion of these words and the adoption of the date of Jan. 1st, 1910. They had given away a great deal by accepting this and he should be sorry if anything were done to interfere with the amendment. There was no thought of protecting the medical profession—he disavowed that entirely; but he did want that when the Bill became law care should be taken that at some day earlier than 1910, or even later, they should have security that every woman who performed these important functions was a properly instructed and informed person. He could not say that he was satisfied with the constitution of the Central Midwives' Board. He did not think that the relation of county councils to the Bill was sufficiently defined and he did not think that the

present form of it would work very freely. He should like to see the medical officer of health in every locality made more directly responsible for the supervision of these midwives. If they did something of that kind they should reinforce the very proper and just demand made generally that every county council should now have a medical officer of health. Altogether, he believed that this Bill was only part of a large measure of legislation which was needed by the country. He did not think that it was right to have been left in the hands of a private Member, and now that the Home Office had assumed to some extent some responsibility for the Bill he hoped that the Home Office would look after it very carefully and see it was not altered on the point he had named. In his view there was needed legislation for the exercise of supervision over all classes of nurses in the country.

Mr. BANBURY expressed general approval of the Bill.

Mr. T. P. O'CONNOR said that he entirely sympathised with the desire that the Jubilee Nurses should be represented at the Central Midwives Board, and in this connexion he pointed out that the Board was to a large extent a London Board, and he thought it would be well to have some representation on it of the provinces. He also suggested that the rules to be framed should be laid on the table of Parliament in order that, if necessary, Members should have an opportunity of discussing them. As to the compromise, he hoped that the Home Secretary would accept the verdict of this House. With regard to what the Home Secretary had said about himself, he would only ask the House to remember that when he voted against the proposal in the Grand Committee he was making the best battle he could to get some form of compromise. He admitted that difficulty might be encountered in the rural districts, but he would ask the House to bear in mind that they had begun a good work and he hoped they would continue it. He hoped that the promoters of the Bill would endeavour to assimilate the English to what prevailed in Ireland in this connexion. He thought it was somewhat discreditable to a rich country like England that it should lag behind Ireland.

Mr. COHEN accepted the Bill as a distinct advance.

Sir FRANCIS POWELL said that he had felt great regret that many of his medical friends had not regarded this legislation with more favour, but he was confident that when the Bill came into operation their views would undergo a change.

Mr. SCHWANN spoke in favour of the Bill.

Mr. JESSE COLLINGS said that he wished to reply to the appeal which had been made to the Government to pledge itself to take charge of the Bill in another place. It must be evident to the House that the Government could give no such pledge. From the beginning it had been perfectly understood that this Bill was not a Government Bill but was absolutely in the hands of the House to deal with it as it thought best and that would be the position, he presumed, in another place. He would vote for the third reading for two reasons. The Bill without the amendment which had been introduced was a thoroughly good Bill and a long step in the right direction—it prevented the term "midwife" being used in a fictitious manner by those who were untrained and unfit for the office. The second reason was that after the conciliatory and courteous manner in which the hon. Member (Mr. Heywood Johnstone) had piloted the Bill through the House and the Grand Committee it would be somewhat uncourteous to throw away his labours. The amendment which had been introduced would prevent any woman doctor from attending a childbirth.

Sir WALTER FOSTER: Women doctors practising in our large towns are all legally qualified for the practice of midwifery.

Mr. JESSE COLLINGS: But they would not be able to attend a childbirth unless they qualify under this Bill.

Sir WALTER FOSTER: They would be in exactly the same position as any medical man; they would be able to attend any case of midwifery.

Mr. JESSE COLLINGS said that in that case he did not know the meaning of the words that no woman should attend a case of childbirth. It was a matter, however, that could be put right. He opposed the amendment because he believed it would inflict hardships upon the poorer classes. He was glad to hear that the terms "Sairey Gamp" and "dirty" and "ignorant" had been applied scientifically, but even so applied he did not think that the terms should have been used. As a class these women were honest and respectable people, and although not trained scientifically they were trained by practice in the calling they followed and at any rate they were an indispensable class. When the Irish dispensary system was recommended he would point out that this system should come first and the penalty afterwards. While protesting against this particular provision he offered no opposition to the third reading of the Bill.

Mr. HEYWOOD JOHNSTONE said that he had no objection to the Queen Victoria Jubilee Institute for Nurses having a representative on the Central Midwives Board, all the more so because he believed that every nurse trained under the rules of the Institute was obliged to be a qualified and efficient midwife. He did not pretend that the Bill was a perfect or final or complete settlement of what was an extremely difficult and important question. It might be, and he dared say it would be, but the beginning of that better state of things which they were told prevailed in Ireland and which he hoped might in due course prevail in England when they had the experience and knowledge which would be gained by the Central Midwives Board created by the Bill. He had never regarded this as a final measure in any shape or form. He was only too glad to see the necessity for legislation recognised by the decision of the House. He had been invited to throw out some indication of what course might be pursued by the promoters of the Bill in regard to the amendment penalising unqualified practice in the other House. Bearing in mind that the insertion of these words was the result of a compromise he could only say for his part that he could neither directly nor indirectly in any way be a party to attempting to upset the compromise. He felt that in such a matter he ought not even to be approached on the subject either privately or publicly and he felt, too, that he ought to abstain from even an indication of his own opinion of what his own preference might be as to the retaining or the omitting of these words. There were grave and weighty arguments that might be used on both sides. On the one side it might be said, and truly said, that the penalising of unqualified practice was recommended by the Select Committee of 1893. It might be said also that it was urged with all the force of a strong medical opinion behind it, and he thought it might be said with even more force that it had often been said that much suffering and much mischief to the poor would still continue to result if they permitted people unqualified, ignorant, and untrained to carry on a practice so responsible and so full of possibilities and dangers. On the other hand, they had the strong argument that if not actually contrary it was certainly greatly in advance of the current of legislation dealing with these matters, that it was for the first time preventing persons from exercising a calling, which up to now from the days of the Pharaohs and even before had been a perfectly legitimate calling. They had also to bear in mind that it might be difficult or impossible to replace those who would be thrown out of practice. And there was besides the argument of the Under-Secretary that people of small means might be prevented from getting the assistance to which they had been accustomed. It had been suggested that this assistance might be provided out of the public funds. That was perhaps rather a delicate matter to touch upon, and he knew that many of those who belonged to the poorest class would shrink from availing themselves of public money; they had an honest and honourable feeling against it. He made these remarks with a view of pointing out to the House how many arguments might be fairly advanced upon both sides of this question, and he hoped that in doing so he had said nothing whatever to indicate any preference or judgment of his own on one side or the other. He was able to approach it from a perfectly impartial point of view because it had been his fate and duty to argue both sides of the question. The Bill left him with fragrant memories of zealous and kindly sympathy, of help tendered and given by many valued friends, by many unknown and he was afraid also unacknowledged, but not the less well-appreciated friends, and memories of useful criticism, of helpful suggestion, and of opposition in which if there was ever bitterness it had merged into respect, and respect had been succeeded by thorough goodwill and fellowship.

Mr. TOMLINSON, while speaking in favour of the Bill, hoped its provisions would be carefully scrutinised.

Lord HUGH CECIL suggested that the exact position of the Government with regard to the Bill should be explained.

Mr. JESSE COLLINGS said that he thought he had explained very clearly that this was not a Government Bill. From the beginning it had been regarded as a Bill fully in the possession of the House and one for which the Government was not responsible.

Lord HUGH CECIL: Then I understand that the Government does not consider itself to be in any degree bound by the compromise arrived at?

Mr. RITCHIE: I must make it quite clear. My position in regard to the matter is this. I prefer the Bill as it was originally but I very much prefer the Bill as it stands now to not having any Bill at all.

Sir WALTER FOSTER: The right hon. gentleman said that he would not oppose the Bill.

Mr. RITCHIE: I do not mean to oppose the Bill in any way, but when the hon. gentleman asked me that question I was speaking about the position of the Bill as it stood in the House and I said that I myself should not vote against the compromise. I certainly decline to be responsible for anything that the House of Lords may do. Over the House of Lords I have no control.

The Bill was then read a third time.

It now goes to the House of Lords.

BOOKS, ETC., RECEIVED.

AMERICAN CLIMATOLOGICAL ASSOCIATION, Philadelphia.

Transactions of the American Climatological Association for the Year 1901. Vol. xvii. Price not stated.

DEUTICKE, FRANZ, Leipsic and Vienna.

Des Kindes Ernährung, Ernährungsstörungen und Ernährungstherapie. Ein Handbuch für Aerzte von Prof. Ad. Czerny, Director, und Dr. A. Keller, Assistent, der Universitäts-Kinderklinik zu Breslau. Dritte und Vierte Abtheilungen. Price M.4.50.

Lehrbuch der Klinischen Untersuchungs-methoden. Für Studierende und Praktische Aerzte. Von Prof. Dr. H. Sahli, Director der Medicinischen Universitätsklinik in Bern. Dritte umgearbeitete und ergänzte Auflage. Price M. 20.

GAULTIER, MAGNIER, ET CIE, 55, Quai des Grands-Augustins, 7, Bonaparte, Paris.

Introduction à l'Étude de la Figure Humaine. Par le Doctor Pa Richer, de l'Académie de Médecine. Price 10 francs.

GILL, GEORGE, AND SONS, Limited, Minerva House, Warwick-lane, E.C.

Hygiene: A Manual of Personal and Public Health. By Arthur Newsholme, M.D., F.R.C.P. Lond. New edition, 1902. Price 4s. 6d.

GILL, L. UPCOTT, Bazaar Buildings, Drury-lane, W.C. (late of 170, Strand).

Practical Lip-reading for the Use of the Deaf. By E. F. Boultbee. Price not stated.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

Regional Anatomy of the Head and Neck. For Students and Practitioners of Dentistry. By William T. Eckley, M.D., Professor of Anatomy in Dental Department, University of Illinois; and Corinne Buford Eckley, M.D., Demonstrator of Anatomy in Dental Department, University of Illinois. Price 12s. 6d. net.

KING, P. S., AND SON, Orchard House, Westminster, S.W.

Sewage Works Analyses. By Gilbert J. Fowler, M.Sc. Vict., F.I.C., Superintendent and Chemist, Manchester Corporation Sewage Works. Price 6s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.

Drink, Temperance, and Legislation. By Arthur Shadwell, M.A., M.D. Oxon. Price 5s. net.

MACMILLAN AND CO., LIMITED, London.

Mammalia. By Frank Evers Beddard, M.A. Oxon., F.R.S., Vice-Secretary and Prosector of the Zoological Society of London. Price 17s. net.

OLIVER AND BOYD, Edinburgh.

Manual of Bacteriological Technique and Special Bacteriology. By Thomas Bowhill, F.R.C.V.S., F.R.P.S., Civil Veterinary Surgeon attached Army Veterinary Department; late Special Lecturer on Bacteriology, Medical Department, and Professor of Bacteriology, Veterinary Department, University of California. Second edition, enlarged and thoroughly revised. Price 21s. net.

PENNSYLVANIA SOCIETY FOR THE PREVENTION OF TUBERCULOSIS, Philadelphia, U.S.A.

Report for the Year ending March 1st, 1902. Price not stated.

SCIENTIFIC PRESS, Limited, 28 and 29, Southampton-street, Strand, W.C.

The Human Body, its Personal Hygiene and Practical Physiology. By Buel P. Colton, author of "Practical Zoology," and Professor of Natural Science in the Illinois State Normal University. Price 5s.

SMITH, ELDER, AND CO., 15, Waterloo-place, S.W.

Medical Lectures and Aphorisms. By Samuel Gee, M.D., Fellow of the Royal College of Physicians; Honorary Physician to H.R.H. the Prince of Wales, and Physician to St. Bartholomew's Hospital. Price 6s.

The Roll-call of Westminster Abbey. By Mrs. A. Murray Smith (E. T. Bradley), Author of "Annals of Westminster Abbey," "The Deanery Guide to Westminster Abbey," &c. Price 5s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ANDERTON, J. R., M.R.C.S., L.R.C.P. Edin., has been re-appointed Medical Officer of Health to the New Mills Urban District Council.

BLACKER, G. F., M.D. Lond., F.R.C.S. Eng., F.R.C.P. Lond., has been appointed one of the Examiners in Midwifery to the Examining Board of the Royal College of Physicians of London and Royal College of Surgeons of England.

BLAMEY, JAMES, M.R.C.S., L.S.A., has been appointed District Medical Officer for Perranarworthal by the Falmouth Board of Guardians.

BROWN, GEORGE P., M.B., B.S. Univ. N.Z., has been appointed Senior House Surgeon at Dunedin Hospital, New Zealand.

DUNCAN, S. V., M.R.C.S., L.R.C.P. Lond., has been appointed District Medical Officer and Public Vaccinator for the District of Kookynie, Western Australia.

EASTERBROOK, C. C., M.A., M.D., M.R.C.P. Edin., has been appointed Medical Superintendent to the Ayr District Asylum, vice C. H. Skae, M.D., resigned.

GARBUTT, RICHARD H. O., L.R.C.P., L.R.C.S. Edin., has been appointed Certifying Factory Surgeon for the Tow Law and Stanhope Urban Districts and the Weardale Rural District, county Durham.

GUARDON, E. J., L.R.C.P. Edin., M.R.C.S., has been appointed Officer of Health at Nannine, Western Australia.

HAWES, I. H. S., M.B., B.Sc. Durh., has been appointed Assistant House Surgeon at the Radcliffe Infirmary, Oxford.

ICK, T. E., M.B. Melb., has been appointed Public Vaccinator for the District of Broad Arrow, Western Australia.

MCNAUGHTON, J. G., M.D., M.R.C.P. Edin., has been appointed Pathologist to the Clinical Hospital, Manchester.

O'BRIEN, DANIEL P., F.R.C.S.I., has been appointed Visiting Medical Officer to the Meteor Park Orphanage, Stanwell, Rockhampton, Queensland.

SCOTT, SACK NOY, M.R.C.S., L.R.C.P. Lond., has been reappointed Medical Officer of Health to the Pimpton Rural District Council.

STOWE, WILLIAM REGINALD, M.R.C.S., L.R.C.P. Lond., has been appointed Public Vaccinator for the District of Palmerston North, New Zealand.

THURSTAN, E. PAGET, M.D. Cantab., has been appointed *pro tem.* Acting District Medical Officer at Katanning, Western Australia.

TODD, C. E., L.R.C.P. Lond., M.R.C.S., has been appointed Hon. Assistant Surgeon at the Adelaide Hospital, South Australia.

TWINING, VINCENT WING, M.B., C.M. Aberd., has been appointed Honorary Physician in Charge of the x-ray Department at the Kingsbridge (Devon) Cottage Hospital.

WIGHAM, WILLIAM HARPER, M.B. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the South Molton (Devon) Town Council.

WILKINSON, G. T., L.R.C.P. Edin., L.R.C.S.I., has been appointed Medical Officer of Health to Selby District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

APPLECROSS DISTRICT OF THE PARISH OF APPLECROSS, Ross-shire.—Medical Officer and Vaccinator.—Salary £36, with house.

ASHANTI GOLDFIELDS CORPORATION.—Medical Officer. Salary £500 per annum.

BEVERLEY, EAST RIDING LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, with board, lodging, and washing.

BIRKENHEAD UNION INFIRMARY, WORKHOUSE, AND SANITORIUM.—Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BLACKBURN COUNTY BOROUGH.—Assistant Medical Officer of Health, unmarried. Honorarium of £50 per annum, with board and lodging.

BRISTOL CITY LUNATIC ASYLUM.—Medical Assistant, unmarried. Salary £140 per annum, increasing to £160, with apartments, board, and washing.

CROYDON BOROUGH HOSPITAL.—Resident Medical Officer. Salary £160 per annum, with board and residence.

DEVONPORT ROYAL ALBERT HOSPITAL.—Resident Medical Officer, unmarried. Salary £110 per annum, with board and lodgings.

FISHERTON ASYLUM, Salisbury.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue.—Resident Medical Officer, unmarried. Salary £80 a year, with full board.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Fifth Assistant Medical Officer, unmarried. Salary £170, with board, lodging, and washing.

HARTLEPOOLS HOSPITAL.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

HEREFORD COUNTY AND CITY ASYLUM.—Senior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing. Also Junior Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium of £25.

HOSPITAL FOR WOMEN, Soho-square.—Registrar. Honorarium twenty-five guineas.

HULL ROYAL INFIRMARY.—Casualty House Surgeon for not less than six months. Salary £80, with board and lodging.

IRELAND, QUEEN'S COLLEGES.—Dunville Professorship of Physiology; also Professorship of Natural History.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Salary £25, with board and lodging.

LONDON COUNTY ASYLUM, Bexley, Kent.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

LONDON HOSPITAL MEDICAL COLLEGE.—Assistant Demonstrator of Anatomy. Salary £90 a year.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary £100 per annum. Also Assistant Surgeon.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, apartments, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—Second Assistant House Physician. Salary £50 per annum, with board and residence, or £100 a year and board.

NEWCASTLE-UPON-TYNE, CITY HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Officer. Salary £100 per annum, rising to £150, with board, lodging, &c.

NORFOLK AND NORWICH HOSPITAL.—Second Assistant House Surgeon for six months. Honorarium £20, with board, lodging, and washing.

NORTHAMPTON GENERAL INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, attendance, and washing.

NORTHAMPTON, ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES.—Assistant Medical Officer for three months. Salary four guineas a week, with board, lodging, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, light, and fuel.

PARISH OF FULHAM INFIRMARY, St. Dunstan's-road, Hammersmith, W.—Second Assistant Medical Officer for six months. Salary £80 per annum, with board, apartments, and washing.

ROYAL EDINBURGH ASYLUM.—Assistant Physician.

ROYAL EYE HOSPITAL, Southwark.—House Surgeon. Salary fifty guineas per annum, with board and lodging.

SALOP INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board and apartments.

SANITARY INSPECTORS' EXAMINATION BOARD, 1, Adelaide-buildings, London-bridge, E.C.—Examiner, who must be a Medical Officer of Health.

SOMERSET AND BATH ASYLUM, Cotford, Taunton.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, &c.

SEAMEN'S HOSPITAL SOCIETY.—Surgeon at the Branch Hospital in the Royal Victoria and Albert Docks, E.

THROAT HOSPITAL, Golden-square.—Senior House Surgeon (resident) and Junior House Surgeon (non-resident). Salary of the Senior £50 per annum, with board, lodging, and washing, and of the Junior £100 per annum, with lunch daily.

WALTHAMSTOW URBAN DISTRICT COUNCIL ISOLATION HOSPITAL, Chingford.—Resident Medical Officer. Salary £120 per annum, with board and lodging.

WANGFORD UNION.—Medical Officer. Salary at rate of £132 per annum, with fees.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, and washing.

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried. Salary £120, with board and residence.

WOLVERHAMPTON GENERAL HOSPITAL.—Assistant House Physician for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

YORKSHIRE COLLEGE, Leeds, Pathological Department.—Junior Demonstrator. Salary £120.

Births, Marriages, and Deaths.

BIRTHS.

LE FLEMING.—On June 11th, at Wimborne, Dorset, the wife of E. Kaye Le Fleming, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., of a son.

POWER.—On June 10th, at Regent's Park-road, N.W., the wife of Capt. J. H. Power, R.A.M.C., of a son.

RYGATE.—On June 12th, the wife of H. B. Rygate, M.B. Durh., Fonnereau House, Ipswich, of a daughter.

DEATH.

DICKINSON.—On June 11th, at Alassio, Italy, Edward Dickinson, M.R.C.S. Eng., formerly of Rugby, in his 89th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"THE SEQUEL TO VACCINATION WITH GLYCERINATED CALF LYMPH."

THE *Redruth Times* of June 13th publishes a letter under the above title signed J. West, and dated from Stratford-on-Avon, which contains a particularly silly and malignant falsehood concerning vaccination. The story which Mr. J. West tells is as follows:—

"Amongst the most recent victims sacrificed at the altar of this modern Moloch is that of Job Williams, aged 29, who lived at 20, Kenmont-gardens, College park, W., and was employed as a carman by Messrs. Warner and Company, Flora Wharf, Harrow-road, by whom he was sent with a load of building material to the new isolation hospital in course of construction at Dartford. Before being permitted to enter the premises re-vaccination was sought to be insisted upon, but for four hours Williams resisted the demand, and finally gained his point. On a second journey about a week later, however, he felt that his situation would be jeopardised by a further refusal and so he submitted to the operation. A 'terrible' arm resulted, the inflammation appeared to strike inward, and in 15 days the poor fellow died. He had not previously suffered a day's illness, but was a robust man, and he leaves a widow and two young children."

This awful story is duly prefaced with remarks about "preposterous adulteration" and "consignment to limbo," and concludes with a string of such phrases as "mischievous vaccination fetish," "despicable tyranny," and "hateful delusion"; so that when we read Mr. J. West's effusion we knew that it emanated from the usual violent muddle-headed opponent to medical science. But as he gave exact details we did him the honour, without believing him, to make inquiry into his facts. So we addressed a letter to Messrs. Warner and Co., Flora Wharf, Harrow-road, begging particulars of the tragedy. A reply duly reached us from West's Stourbridge Brick Co., Ltd., whose depôt is the Flora Wharf, Harrow-road, W., and who sign as "late Warner and Co." West's Stourbridge Brick Co. say that no such man has ever been in their employ as Job Williams and that, as far as they know, there is no truth whatever in the story. In these circumstances Mr. J. West owes apologies all round for circulating a silly circumstantial lie. We are not sure if he sent the letter to the *Redruth Times*, for it is headed "To the Editor of the *Cornubian*"; but the Editor of the *Redruth Times* has the right to be sore at the mendacity of the story to which he has given circulation. The Editor of the *Cornubian* ought to be yet more aggrieved; while the explicit insinuation that the proprietors of the Flora Wharf have driven an employé to death may well be resented by West's Stourbridge Brick Company. We do not suppose that any of these people will think Mr. J. West worth a thought, and although we have exposed his inaccuracy we have not stopped the dissemination of the yarn. The tragedy of Job Williams will yet be narrated from platforms and quoted in provincial newspapers. Job Williams will leave, in addition to the widow, aged parents to mourn their loss. He will die of all sorts of complications and the two orphans will expand into a large family of bereaved infants. But though we know that it is most unlikely that we shall be able to overtake Mr. J. West's lie we still think it right that it should be hall-marked as such.

HOMES FOR EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—I shall be very much obliged if any of your readers could tell me where there is a home which would take in an epileptic girl of about 25 years of age, strong and otherwise healthy except for a slight mental deficiency, willing, and able to work. She has £350, which is bringing her 4½ per cent., and this would be paid to the institution. She is of the small-farmer class of life.

I am, Sirs, yours faithfully,
W. G. WILLOUGHBY,
Medical Officer of Health of Eastbourne.

Eastbourne, June 17th, 1902.

THE ABORTION-MONGER.

WE have frequently referred to the infamous advertisements of abortion-mongers which appear from time to time in the daily or weekly press. Their trend was quite obvious although veiled in ambiguous language. A correspondent, however, has sent us a leaflet which he says was left at one of his surgeries. This leaflet sets forth the talents and successes of an abortionist called Madame J. Jacobsen whose only address is 22, Mather-street, Newcastle-on-Tyne. The bill contains the usual lies about obstructions and irregularities and further states that "it is a subject too which for various reasons the medical world give very little attention to, hence the frequeney of their failure to give relief when relief is most essentially needed." Madame Jacobsen sells a female mixture which "is warranted to be superior to all other female medicines, inasmuch as it will positively restore irregularity." It seems, however, to have struck Madame Jacobsen that the restoration of irregularity was a somewhat questionable boon, for she also sells special female pills which "never fail to give relief." Madame Jacobsen also states that the "utmost secrecy may be strictly relied upon." She, however, gives a variety of testimonials from which we extract the following. It will be seen that, by the writers' statements, it is no question of simple amenorrhœa.

"Manor's Station Arches, City-road, Newcastle.

DEAR MRS. JACOBSEN,—Please forward by return of post to my address one box of your Special pills, for bringing about all that is required. I had a box of them before and found them just the thing. Yours truly,

Mrs. B."

"Consett.

DEAR MRS. JACOBSEN,—Will you kindly forward me another bottle of your Strongest Mixture, also a box of your Special Pills, for which I enclose Postal order trusting you will send it as soon as possible. It is four weeks over the time, so you will know what to send for me, and I beg of you to do your best to put me right. I think you will understand my case, as you have cured me three times before. I am, yours sincerely,

Mrs. E. N."

Mrs. E. N., it will be observed, is an old hand and takes matters in time. Others are not so provident.

"Rector-street, Gateshead-on-Tyne,

DEAR MRS. JACOBSEN,—I must thank you for extra care bestowed upon my case. I became all right yesterday after taking only half of the second bottle of Mixture. I consider your medicines to be the best in the world for removing obstructions. My case was a stubborn one of 16 weeks standing, but with your good advice I succeeded, for which I am truly grateful. I shall always recommend you. I am, dear Mrs. Jacobsen, yours truly,

MRS. N."

These unblushing testimonials conclusively show that abortion is the object of the persons who take the pills and medicine. Whether their effects are aided by other means or not we cannot say, but we should not be surprised if this were the meaning of the phrase "extra care" employed by "Mrs. N." We are forwarding a copy of the current number of THE LANCET to the Chief Constable of Newcastle who will perhaps pay a visit to Madame Jacobsen's "only address."

CERTIFICATES FOR INSURANCE SOCIETIES.

To the Editors of THE LANCET.

SIRS,—May I ask for a reply in THE LANCET to the following? I am often asked, as well as other medical men I presume, to fill in certificates of death for life assurance societies on a special form, wherein one is requested to state certain facts as to the cause of death and duration of illness beyond what is demanded by the usual death certificate. I have been in the habit of declining to fill in these papers, referring the companies to the registrar for a copy of my death certificate, as it seems to me one might, by the further information supplied, inadvertently lead to wrong inferences being drawn as to the causes of death and so possibly bring about legal difficulties. 2. If filled in what range of fees should be charged? I am, Sirs, yours faithfully,

X.

*** Most life offices require the representatives of the deceased to obtain a certificate from the medical attendant in the form desired by the particular office. This form varies according to the office. The medical man cannot be compelled to sign it but we have never heard of a refusal. The fee charged should be according to the usual scale of fees for attendance.—ED. L.

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—In the autumn of 1900 I had the pleasure of writing you a short account of the experiences I had with a Benz motor car which I bought in May of that year (*vide* THE LANCET, Oct. 6th, 1900, p. 1048). Perhaps now I can write with greater authority on the subject, as I have continued to use the car (except when *hors de combat*, which I regret to have to say has been rather frequent of late) until the present time To take matters *in extenso*.

The carriage.—After two and a half years any carriage, I presume, would wear, and as I have not had mine repaired as yet the appearance is not prepossessing and the frame rattles and is worn and loose; the paint, too, is conspicuous by its absence.

The tyres.—The district in which I use my car is hilly and the roads are the reverse of good, so you will not be astonished to hear that I am using my third set of tyres on the driving or back wheels. On both occasions I have bought the same tyres as supplied with the car, "Connolly Ideal," solid wired on to the rims. I understand and believe they are the best, especially for constant use such as that of a man in practice. With rough wear I find a set last about 14 months. I believe I paid £12 for the four tyres, or £7 for the tyres on the driving-wheels.

The transmission gear.—Mine being an early type of Benz the power is conveyed by two belts to the counter-shaft, the belts running on loose pulleys on the counter-shaft and being shifted on to keyed pulleys by a fork. As you may remember, I mentioned in my previous letter that in one of my longer runs the second-speed loose pulley, through improper lubrication, seized and had to be rebushed. Apparently in bushing the journal cracked; any way, since then I have had to have a fresh pulley. The keys that fix the sprockets to the counter-shafts have also worn, and once when I was driving one fell out and left me in a nice hole, the counter-shaft revolving and not

driving the sprockets. Recently the sleeve on the right of the counter-shaft, over which the second-speed loose pulley revolves, broke away from the teeth of the compensation gear to which it is keyed, the result being once more the revolution of the counter-shaft without driving the sprockets and a journey home behind the car which was not as pleasant as one seated in it. A new sleeve which took three days to get soon remedied matters. The forks that shift the belts easily wear and then, while driving on one belt, the other is apt to slip off the loose pulley and pull the car up. Steel tubing placed round the sides of the forks prevents this wear and can always easily be renewed. The only other matter that requires attention on the transmission gear is the ball-bearings that fix it to the car. I should always advise carrying a loose collar for the ball-bearing. On two occasions I have had a collar break and the balls fall out.

The engine.—The water-joints on the cylinder, especially the one at the back, have occasionally to be renewed—a not pleasant or easy task to do. A leakage can always be told by the presence of water in the cylinder. I make a rule of opening the cylinder-cock every morning and if on pulling the fly-wheel round much water escapes I know the water-joints want seeing to.

The valves.—The valves want frequent grinding, otherwise there is a great loss of power. The advantage in the old Benz is that both the inlet and exhaust valves have vertical spindles; horizontal ones are apt to wear more on one side than the other and so to stick. The exhaust valve is lifted up by a quadrangular arrangement worked by a cam. The teeth on the cam are of fibre. On one occasion while in Hampshire two of the teeth broke off and if I had not luckily come across the possessor of another Benz who allowed me the loan of his cam I should once more have had to proceed home by other means than the car. My advice is, always carry a spare cam. The arrangement in the new Benz for working the exhaust is better The rods on mine wore so much oval that I had to get a fresh set, though I believe mine could have been rebushed.

The cylinder.—This is, I presume, the great objection to the Benz, being horizontal, the advantage claimed for this type being, however, greater ease in lubrication and consequently less wear. Undoubtedly small horizontal types the cylinder is apt to wear oval, and though I have had new piston rings fitted recently by Hewetson the power is not as good as before and I have no doubt that there has been bed wear and that it is a little oval

The bearings.—I have had to have fresh brasses fitted on to the crank and the side bearings are now greatly worn, and as they allow too much play will doubtlessly soon have to be replaced by new ones. The brasses on the crank when they wear oval can be filed and so tightened.

I use Wellington belting and find that it lasts well and gives little trouble. The new Benz, I believe, has an arrangement to prevent the belts getting wet—a cause of slipping. On my car I have fixed a piece of oilcloth in front which generally keeps them dry. The teeth on the steering rods have worn quite sharp and therefore the rods have recently had to be replaced. The wheels run on ball-bearings and in the time I have had the car the spokes have not given any trouble. Of course, the bearings require periodically seeing to and the worn balls to be removed and fresh ones inserted. The chains are Brampton's and of course require occasional picking up. I am now using my third set.

Conclusions.—At the end of my last communication I fear my conclusions were rather gloomy. Are they better now? I have had much pleasure out of the motor. I have had many worries. Occasionally on the road to an urgent case I have had to get out and walk. More than once have I been obliged to engage a cab when the motor was undergoing repairs. And then the question of expense. My bill from Hewetson for this year only for repairs is £30 and this does not include £12 spent on tyres. Such being the case I hesitate to recommend my professional brethren to embark in one. I give them the facts and leave it to them to draw their own conclusions both as regards the Benz and other cars. I may conclude by saying that I am seriously thinking of trying another myself. I am, Sirs, yours faithfully,

CHARLES T. W. HIRSCH, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.,
Public Vaccinator and Police Surgeon, Woolwich;
late District Medical Officer, Colonial Medical Service, Fiji.
Woolwich, June 14th, 1902.

THE "Y" FUND.

SURGEON-GENERAL H. S. MUIR begs thankfully to acknowledge additional donations towards the above Fund from The Marchioness of Ripon, Lady Mitchell Banks (who sent kind donations from Lady Tate, "Two Friends," Mr and Mrs. Wilkinson, Mrs. Illingworth, Mrs. Pearson, Mrs. Whitewell, Mrs. Harris, Mrs. Blood, Mrs. Fleetwood, Mr. and Miss Hakes, Mrs. Mac Fee Campbell, Mrs. F. Johnston, Mrs. Barr, Mrs. Wright, Mrs. McAlister, Miss Carter, Mrs. Thirlwall Thomas, Miss Grünbaum, Mrs. Burton, Mrs. Withers, Miss Binger, Mrs. Dalzell, Mrs. Stevenson, Mrs. Caton, Mrs. G. Walker, Mrs. H. Nicholls, Miss Abram, Mrs. Cunliffe, Mrs. Gee, Mrs. Westby, Mrs. Robinson, Mrs. Mahler, Mrs. Rankin, Mrs. Graves, Mrs. Brannigan, Mrs. Horniblow, Mrs Riggs, Mrs. Burrell, T. A. W., C. N. W., M. G. W., Dr. W. Edgecombe, Dr. T. R. Bradshaw, Dr. J. M. Hunt, and Mr. Murray), Captain and Mrs. Salisbury Sharpe (with kind donations from Mr. E. Pandorf, Mrs. Drabble, Mrs. Corell, Mrs. Carr Shaw, and Mrs. Blindstone), Dr. and Mrs. J. Harper (with kind donations from Dr. W. B. Stokes, Dr. A. R. H. Bland, Dr. S. Beauchamp, and Mr. Walter Tyrrell), Surgeon-General Sir W. D. Wilson, K.C.M.G., A.M.S., Surgeon-Lieutenant-Colonel F. H. Hensman, C.M.G., A.M.S. (retired), and the following officers of the Royal Army Medical Corps: Lieutenant-Colonel H. W. Murray; Majors W. H. Pinches, and A. Hickman Morgan, D.S.O.; Captains W. T. Mould and G. A. T. Bray; and Lieutenants T. C. Lauder and E. McDonnell. The fund now amounts to £305. It may be explained that this is in response to an appeal made privately to members of the profession for benevolent aid in a distressing case which has been described in a letter sent to a limited number of medical men (who would help the cause by kindly "handing on" to *confrères*). Should any reader of THE LANCET desire further particulars with a view to expressing *practical sympathy*, a copy of the letter will be forwarded on application to Surgeon-General Muir, 26, Kensington-gardens-terrace, Hyde Park, London, W.

A PLACE OF RESIDENCE.

To the Editors of THE LANCET.

SIRS,—In reply to "P. P.'s" query in THE LANCET of June 14th, p. 1743, regarding a place of residence the Isle of Man would satisfactorily fulfil the requirements. An illustrated guide-book with a chapter on the climate may be obtained free of charge and post free on applying to Mr. W. Keig, secretary of the Board of Advertising, Douglas, Isle of Man. I am, Sirs, yours faithfully,

June 16th, 1902. J. H. B.

THE LAW FUND.

TRUSTEES: THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, AND THE MASTER OF THE SOCIETY OF APOTHECARIES OF LONDON.

THE following additional subscriptions have been received by Dr. Paramore, 2, Gordon-square, W.C.:—

	£	s.	d.
Mr. Charles Higgens ...	2	2	0
Mr. E. J. Day	0	2	6
Dr. Edmund Hargreaves	0	2	6
Dr. Richard Deane Sweeting	1	1	0
Rev. J. T. Fowler, M.A., D.C.L., M.R.C.S. Eng.	0	5	0
Mr. Charles Martin Row	1	0	0
Mr. Charles Albert Foyl	0	10	6
Mr. John Noakes Hall	0	5	0
Dr. Hugh James Dickey	0	10	6
Dr. Clarence William Haig Brown	1	1	0
Dr. George Alexander Gibb	1	1	0
Mr. Alfred Pearce Gould	2	2	0
Dr. Gavin Stiell... ...	1	1	0
Mr. Wm. Henry Watts...	0	5	0
Dr. G. A. England... ...	0	5	0
Dr. John Campbell Fergusson	1	1	0
Mr. Alfred N. Godby Gibbs	0	10	6
Dr. Wilfred Newell Soden	0	10	6
Mr. Wilson Eager ...	0	10	0
Mr. Charles Smyth ...	0	10	6
Dr. Claude Wilson ...	1	0	0
Dr. Thomas Wakefield...	0	5	0
Mr. Alfred Downing Fripp, C.B., C.V.O. ...	3	3	0
Mr. H. A. Hall	0	5	0
R. J. G.	2	2	0
Mr. Charles Henry Wakeham	0	2	6
Mr. T. H. W. Idris, J.P.	0	10	6
Dr. Geo. Eugene Yarrow	0	10	0
Dr. Charles John Girling	0	5	0
Dr. Arthur R. Graham...	0	5	0
Mr. David Basil Hewitt	1	1	0
One who wishes he could give ten times as much	0	10	6
Dr. A. F. G. Codd	1	1	0
Dr. Tom Robinson	1	1	0
Dr. Karl C. Gimson ...	1	1	0
Dr. Edwin Hyla Greves	0	10	6
Dr. Wm. Fairbanks ...	0	5	0
Mr. F. T. Hindle	0	5	0
Mr. Anthony A. Henley	1	1	0
Dr. Charles Henry Greaves	0	10	6
Mr. Walter Frost	0	10	0
Mr. Edgar Elliott	1	1	0
Mr. Henry Henstead ...	0	4	0
Mr. James Smyth	0	10	6
Dr. Samuel Herbert Habershon	2	2	0
Enfield Medico-Ethical Society, per Dr. Fredk. J. Tresilian	2	2	0
Dr. Josiah Oake Adams	1	1	0
Mr. Francis Hepworth...	0	10	6
Mr. Wm. Bramley Taylor	0	10	0

WANTED—A DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers help me with diagnosis in the following cases? One is a man aged 50 years and the other is a man aged 60 years. They are practically identical; both are active, healthy, careful men, and both are of a gouty habit. So long as they are up they feel nothing but no sooner do they get to sleep than they are awakened by pains in both hands and forearms. The hands feel as if they were swollen but nothing is apparent to others except that they are perhaps a little red; certainly not blue or pallid. Posture in bed has no effect, and the only thing that gives any relief—and this is only partial—is to raise the hands above the head. It has existed for a year or two. With each every likely remedy has been tried; nothing has any effect and they are gradually suffering more and more. Any suggestions as to cause would be valued. I am, Sirs, yours faithfully,

June 17th. X.

PROPOSED MEMORIAL TO THE LATE SURGEON-GENERAL W. NASH, A.M.S.

THE following additional subscriptions to the fund have been received:—Surgeon-General J. O'Nial, C.B., £1; Lieutenant-Colonel A. B. Cottell, £1 1s.; Captain T. C. Lauder, 10s.; previously acknowledged, £101 11s. 6d. Total, £104 2s. 6d. The committee desires to inform intending subscribers that the Fund will be closed on August 2nd next.

A Final Man.—"Filatow's spots" are the same as "Koplik's spots." They are spots which have been found in the earliest stages of measles and are regarded as pathognomonic symptoms of that fever. A short note on this eruption will be found in THE LANCET of Feb. 2nd, 1901, p. 347. The *Journal of Physiology* and *Brain* might be consulted for Dr. Head's paper. We have not the exact reference, we regret to say.

Retired M.R.C.S.—Almost invariably the best advice is to recommend the patient to be satisfied with her lot. The only possible procedure is to improve the general nutrition and thus to fatten the patient. We certainly do not recommend local massage, but perhaps our correspondent means general massage with inunction of oil which possibly would be of service. The perils of quackery should be insisted upon.

Student.—There is no way for the unqualified son to keep the practice up in his deceased father's name. A medical man may be found to work the practice on a salary with the understanding that he will retire when the son has passed his final examination, but that medical man cannot practise under the name and style of the dead practitioner.

Mr. R. H. Powers.—Lists of sanatoriums for the outdoor treatment of pulmonary tuberculosis were given in THE LANCET of Sept. 9th (p. 724) and 23rd (p. 851), 1899. These are no longer complete. "Burdett's Hospitals and Charities, 1902," p. 707, might also be consulted.

ERRATA.—In paragraph No. 12 of THE LANCET Commission on Glycerinated Calf Vaccine Lymphs, which appeared at page 1624 of THE LANCET of June 7th, the words "The Rebman Publishing Company" should be "Rebman, Limited." In line 2, column 2 of the same page No. 243 should be No. 343. In the paper by Professor F. C. Madden, published in THE LANCET of May 31st, p. 1533, line 2, column 2, should read, "remained fairly satisfactory for six *days* after the operation," instead of as printed, "six hours."

During the week marked copies of the following newspapers have been received:—*Lincolnshire Echo, Torquay Directory, Burnley Gazette, Northern Times (Golspie), Reading Mercury, Herts Advertiser, Times of India, Aberdeen Free Press, Lancashire Post, Plymouth Morning News, Western Mercury, Yorkshire Post, Pioneer Mail, Devon and Exeter Express, Burnley Express, Scotsman, Ipswich Times, Dublin Evening Telegraph, Southampton Echo, Belfast News, Lancaster Guardian, Bradford Observer, Sheffield Daily Telegraph, Municipal Reformer, Echo, Daily Express, Standard, Bristol Mercury, Windsor and Eton Express, Globe, Westminster Gazette, Sunday Times, Derbyshire Times, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 19th, 1902.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
June 13	29·35	NNW	0·31	63	55	53	53	55	Cloudy
,, 14	29·69	N.W.	1·28	65	58	49	50	52	Raining
,, 15	29·65	W.	0·36	99	60	51	52	54	Cloudy
,, 16	29·77	N.	0·08	70	57	48	52	54	Overcast
,, 17	29·91	N.E.	0·01	109	63	49	50	53	Cloudy
,, 18	30·11	E.	..	102	66	51	52	54	Cloudy
,, 19	29·85	S.E.	...	121	73	51	58	63	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.).

TUESDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (28th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (23rd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Communications:—Mr. A. Underwood: (1) Dental Irritation in a Case of Malignant Disease; (2) A Case of Pulp-stones; (3) A Case of Buried Wisdom Tooth discovered by X Rays and Removed. Paper:—Dr. S. Wallace: Some Effects of the Refinement of Food. The President: Valedictory Address.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. H. M. MacLeod: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Ocular Therapeutics.

TUESDAY (24th).—POST-GRADUATE CLINICAL DEMONSTRATION (Westminster Hospital).—4.30 P.M. Dr. Murrell: Cirrhosis of the Liver.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Tooth: Cerebral Infantile Palsies.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: The Preparation and Application of Sutures and Ligatures.

WEDNESDAY (25th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Cole: Medico-legal Relation of Insanity.

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